DONLEY

Book of Successful Fireplaces

The Fireplace

"I, the Grate Fire, welcome you. Rest here with me. Throw aside the burdens and worries of this and all other days. Draw together the easy chairs of acquaintance and friendship. Let my cheerfulness impart a real warmth and glow in your hearts. Tell here your tales of road and mart and home. And when you go, take the remembrance of this welcome with you. When you come again, feel that there is a place for you before the open fire—that you are welcome here."

Let my glowing embers warm your heart to all the world
Light your fire and never fear,
Life was made for love and cheer.

—Henry Van Dyke: "The Hearthstone."

Fireside enjoyments and home-born happiness.

—Cowper.

When there's room in the heart
There's room at the hearth.

—Adapted.

Shut in from all the world without
Content to let the northwind roar.

—Whittier: "Snowbound."

The fire is welcome when icicles hang without.

—Danish.

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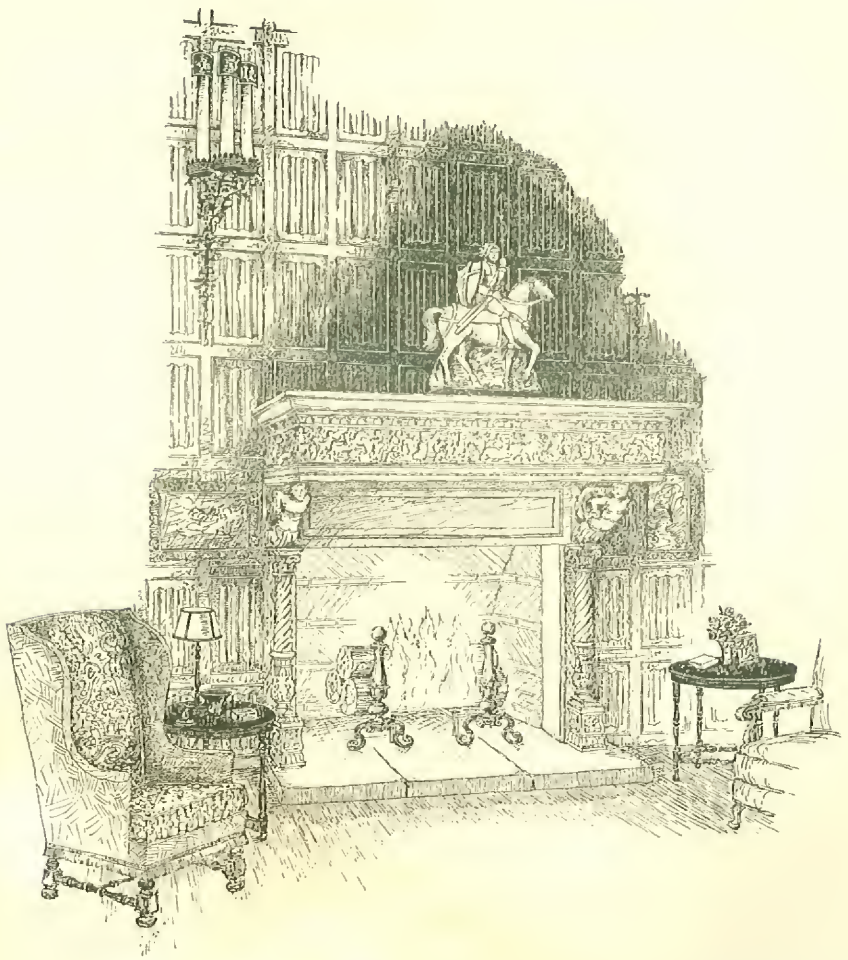


SIXTH EDITION
AUGUST - 1929
PRICE 25c

The Donley Brothers Company

13900 Miles Avenue Cleveland, Ohio

A beautiful combination cut stone and wood fireplace admirably suited for reception hall, foyer, club rooms, etc.

The Story of the Fireplace

AS far back as historians and archeologists have been able to trace, the family fire existed. It has played a big part in all the known traditions of mankind from the very beginning.

How or when primitive man first learned to start the home fire will never be known. Our earliest records show that the first family fire was kindled on the earth itself or on a slab of stone in the midst of a woods.

Centuries later when the family life centered in large halls, enormous fires of logs were built on a central hearth. The room itself was filled with smoke which filtered out as best it could.

The present-day fireplace, as we know it, probably started with the Normans, the race that first built the two-story house. This open fire did not heat the second story. Someone made a shallow recess in a wall with the back sloped upward to a hole connecting with the outside to let the smoke out. Over the fire itself a carved stone hood was placed to collect the smoke. This was the first fireplace and its method of construction continued up to the 14th century.

In Queen Elizabeth's time building had begun to be an art, and builders made a rectangular opening with jams. It was these fireplace ideas that our Colonial forefathers brought to America.

Very little was written about fireplaces in the early Colonial days. Two men, however, did contribute to their improvement. They were Benjamin Franklin and Benjamin Thompson, the latter known as Count Rumford, a scientist, statesman and scholar.

Franklin wrote that the old-fashioned chimneys in houses of his day did allow a door to be shut, yet the funnel required a considerable quantity of air which rushed in at every crevice making a continual whistling or howling, hence it was uncomfortable as well as dangerous to sit near such crevices. During his time these chimneys were reduced by building jams in them, narrowing the hearth and making a low arch or breast. He comments on the fact that the new chimneys kept the room free from smoke.

Count Rumford was the man who did most in improving the fireplace. He reduced the fireplace to practical size by demonstrating the improved heat radiation of shallow fireplace depth and by increasing the splay of the side wall.

Such was the fireplace up until about the latter part of the 19th century and the first few years of the 20th century. During this period the use of gas and improvements in furnaces caused the fireplace to be banished as a heating unit. Many homes were built with no fireplaces or only ornamental fireplaces.

The last 25 years have shown a remarkable change in the relation of the fireplace to the home. Central heating systems, gas, hot water, vapor, steam, oil heat and warm-air furnaces have become general for home heating, but the fireplace has lost none of its prestige. It is now recognized as the dominating feature of decoration in the living room, with enthusiastic admirers when used in other rooms. At the same time it can be depended upon for heat in early Spring and Fall and additional heat in Winter.

The American fireplace is today the most beautiful and practical fireplace in the world.

Successful Fireplaces

Up until recent years the success of a fireplace was a gamble. Many beautiful fireplaces were built of fine stones, woods, marble, etc., only to be ruined by the fireplace belching out soot and smoke. Too, the housewife disparaged the fireplace because of the dirty work in removing ashes.

As a result of these difficulties, even today many beautiful fireplaces have gas appliances installed in them, thus losing the beauty and charm of the open fire.

Nothing is so disappointing to the admirer of a cheerful, open fire as to see a beautiful fireplace with one of these imitation fires. This misuse of the fireplace is particularly discouraging when one considers that any builder can build a fireplace that positively will not belch out smoke or soot into the room and will not require the home owner to carry out ashes.

This improved fireplace is the reason that fireplace popularity is growing every day. American people like the decorative and practical advantages of good-looking, efficient fireplaces. With them, nothing takes the place of a cheery, crackling, open fire around which family and friends may gather.

Practical, because in early spring and late autumn it provides the necessary heat for

Formal Fireplace of Caenstone. Hearth Opening 24 inches. H. R. Tyroler, Cleveland, Owner; Reynold Hinsdale, Architect; Homer Hains, Builder; Mantel by Fischer & Jirouch Co.

Fireplace in the home of Hal Booth. Made of sandstone with 45 inch opening. Architect, Harry Shupe.

Green and white marble, white wood mantel fireplace. Opening, 44 inches. Alger & Knowlton, Cleveland, Builders; Charles S. Schneider, Architect.

Purple marble wood panel fireplace in Stiles Smith home, Cleveland; fireplace opening 42 inches; Architect, Munroe Copper; Builders, Weibenson Bros. Co.

Formal Fireplace of Stone. Dr. J. V. Gentilly, Cleveland, Owner; Harry Shupe, Architect; Heulett Co., Builders.

cool evenings, and on winter evenings it forms a magnet around which the family gathers.

In years gone by, fireplaces were necessary in living rooms and bedrooms. In foreign countries the old custom of making an open fire in the bedroom still prevails. The fireplace has grown so popular that today we scarcely find a home without a fireplace in the living room. Many homes also have fireplaces in bedrooms, dining rooms, sun porches, basement play rooms, and some home owners have even gone so far as to have an out-door fireplace built in the outside walls of the chimney.

Munroe Walker Copper, Jr., Cleveland, Owner and Designer; The Weibenson Co., Builders.

Fireplace Designs

The Donley Book of Successful Fireplaces has been written so that the planners of new homes may be certain that their fireplace will not only be beautiful but efficient as well. It is also our purpose to show the architect and builder that it is just as easy to build a 100% successful fireplace as one that smokes or will not burn properly.

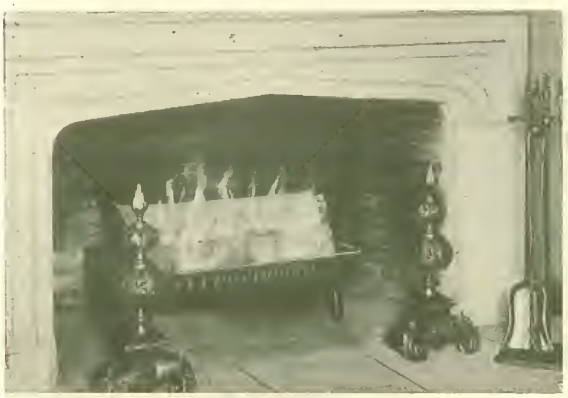
Successful fireplace building is not a matter of cost, but is a question of proper design carefully followed out by the builder and the use of proper equipment.

When the average family is planning a fireplace for a new home, their thoughts are primarily on getting the external design of the fireplace to harmonize with their decorative treatment. The owner who wants accurate information on fireplace decoration would be wise to consult an architect. However, as a preliminary study of fireplace design, the many fireplace illustrations in this book serve to give the owner an inspiration.

If it is impracticable to have an architect, the following suggestions may be helpful: First, avoid the impulse to make your fireplace over-ornate, thus destroying the harmony of the general interior picture. It is also well to avoid having too large a fireplace in proportion to the size of the room. If you

James Brown, Cleveland, Owner; H. J. Shupe, Architect; Brockman Narovec Co., Builders.

H. L. Warner, Cleveland, Owner; H. B. Burdick, Architect; The H. W. Brown & Son, Builders.



Stone Living Room in home of Sidney Rosenblum, Cleveland. Width of Opening, 48 Inches. Brooks & Burrows, Architects; Metzger Co., Builders; Fireplace Front by Branning Tile & Mantel.

W. H. Pratt, Cleveland, Owner; H. L. Shupe, Architect; Geo. W. Thomas, Builder.

want a fine architectural motif in your woodwork and decorations, select a fireplace design that fits, and above all avoid contrasting motifs.

There are many different types of materials that can be used in the external design of the fireplace. The all-brick front is perhaps the most common material. This may be of standard face brick or common brick. In either case it gives an effective warmth and sturdiness. There is no reason why a brick fireplace cannot have design. Some of the illustrations shown in this book carry out unusually different and attractive designs. If the fireplace is to be of wood, the owner will find many beautiful stock wood mantels of various types.

A combination of large-size brick immediately around the fireplace opening with upper fireplace panels of wood is just as popular. Cabinet work may vary from the simple Medieval treatment to the heavily ornate Jacobean, from the delicately figured Adams fireplace to the classical Georgian designs with fluted columns or Colonial designs executed with plain surfaces and simple moldings.

The chief principle in selecting a fireplace front is to see that it coordinates and harmonizes with the interior color scheme and decorative motif. In planning your fireplace, consider the design or exterior appearance, size, and harmony with your decorative scheme.

The photographic collection of actual fireplace installations pictured in this book will help you to select the materials for your fireplace. They cover a wide variety of designs in brick, tile, wood, marble, stone and combinations of these materials. You will find styles for the living room, library, dining

Formal Treatment. Tile and Stone. Dr. C. J. Brocman, Cincinnati, Owner; J. C. Grunkemeyer, Architect; A. Schirmer, Builder.

Formal Stone Fireplace. Gymnasium of Carnegie Institute of Technology, Pittsburgh. Henry Hornbostel, Architect.

Formal Design of Tile. Gymnasium of Carnegie Institute of Technology, Pittsburgh. Henry Hornbostel, Architect.

Stone and Wood Living Room Design. Opening, 42 Inches. J. B. Hummel, Akron, Owner; R. G. Firestone, Architect; Krumroy Construction Co., Builders.

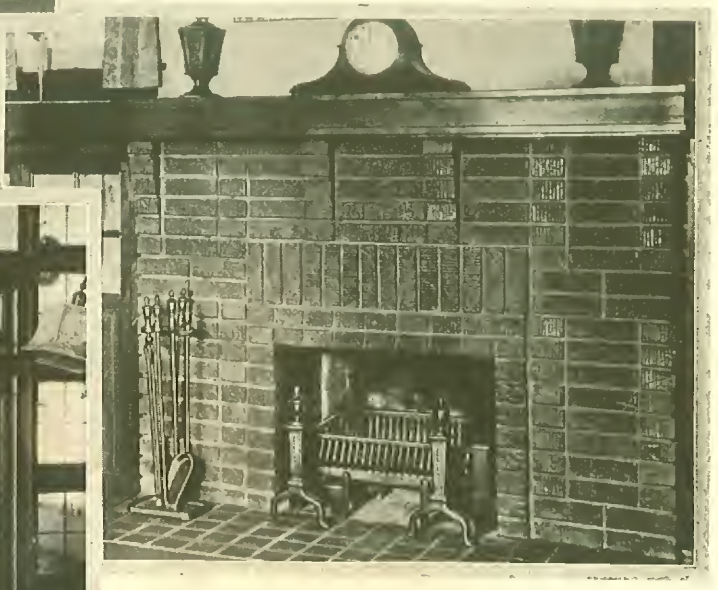
Tudor Design in Caenstone and Wood for Living Room. Opening, 42 inches. A. C. Blinn, Akron, Owner; R. G. Firestone, Architect; Krumroy Construction Co., Builders.

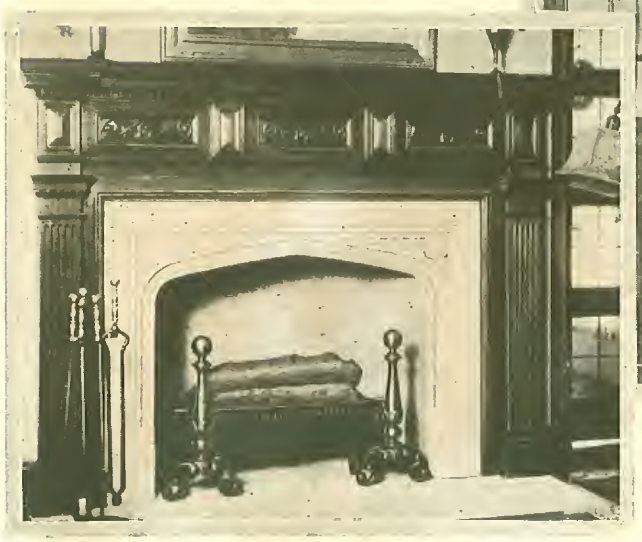
Marble and Wood Fireplace. Opening, 40 inches. W. A. Baker, Akron, Owner; Good & Wagner, Architects; J. W. Hartman, Builder; H. W. Rapp Tile Co., Fireplace Construction.

Right—Living Room Fireplace of Caenstone and Wood. Width of opening, 44 inches. Harry Klein, Cleveland, Owner; Reynold Hinsdale, Architect; Homer L. Hains, Builder.

Left—Living Room Fireplace in Tudor Design, Built of Limestone and Wood. Width of Opening, 48 inches. Will R. Myers, Canton, Owner; Taylor & Taylor, Arch.; E. E. Steiner, Bldr.

Right—Brick and Wood Design in Living Room. J. H. Wheeler, Columbus, Owner, Designer and Builder.





Left—Living Room Fireplace of Briar Hill Stone and Wood. Width of Opening, 42 inches. William Tonks, Cleveland, Owner; H. O. Fullerton, Architect; B. C. Hinig Co., Builders; Fireplace Front by Fischer & Jironch.

room, bed room, basement, porch, country home or cabin.

To help you in the more practical planning of actual fireplace design, the fireplace sketches in the section of this book entitled "A Portfolio of Fireplace Designs" (pages 52 to 65) will be of help. These sketches cover Colonial, English, Spanish, and the newer modernistic types, many of them having been designed by an experienced architect particularly for this book.

If you are not employing the services of an architect, you can show these designs to your mason, who can use them as patterns in building your fireplaces.

Internal Fireplace Design

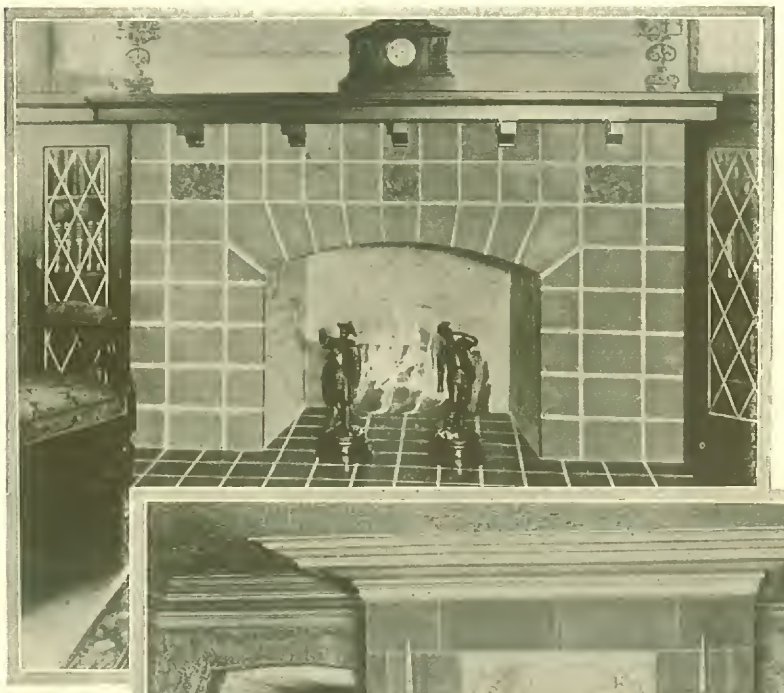
Internal construction of a fireplace is just as important as external construction; in fact, we believe it is more important since a homely fireplace might give out plenty of heat and be beautiful, yet the best looking fireplace, if it will not burn properly, becomes only an ornament.

There is no mystery connected with the proper construction of the fireplace part behind the mantel; in fact, careful reading of this book so that the principles of construction are understood, then seeing to it that the builder follows the plans given on the following pages will assure you of successful interior construction.

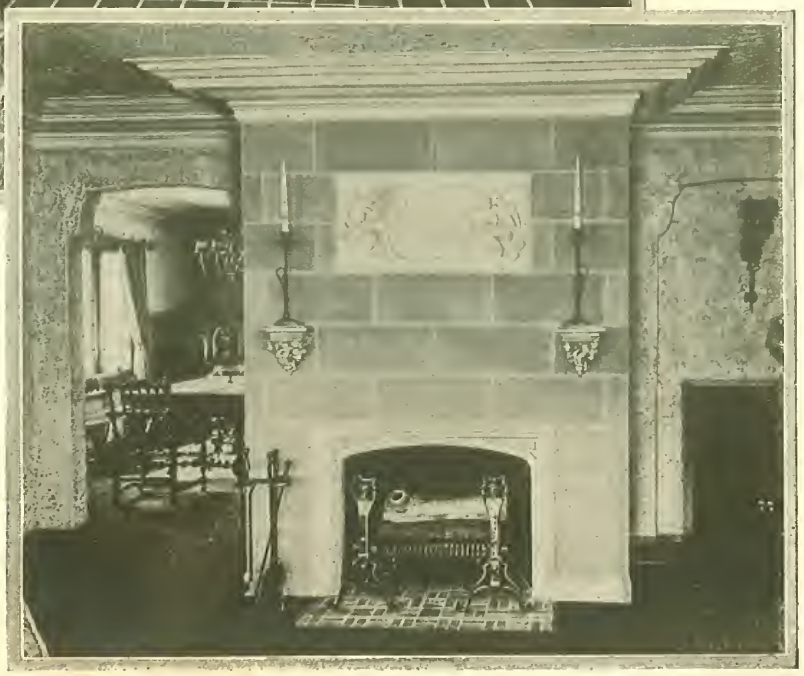
It is no more necessary to have a poorly-built fireplace than it is to have a house with a sagging roof or walls out of plumb. Again let us say that a good fireplace does not cost one cent more than a poor one. The success of a fireplace is based upon two essentials: First, that the plans outlined in the following pages of this book are properly followed;

Fireplace in the Home of John Kling, Jr., Cleveland. White, Rough Finished Stone, with 42-inch opening; Munroe W. Copper, Architect; Weibenson Bros., Builders.

Fireplace in the Educational Model Home, Maple Heights; Chas. R. Greco, Architect; Mogg Cut Stone Co.; Pesch & Drsek.

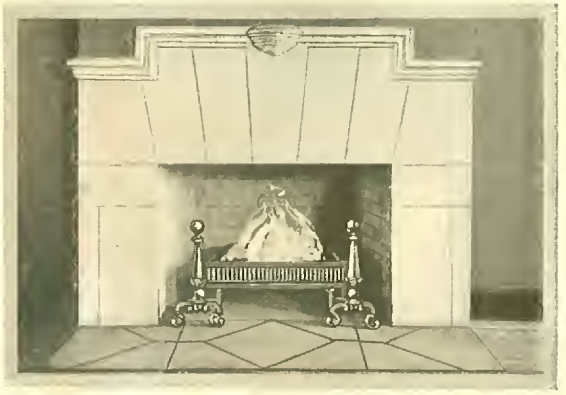


Rockwood Tile Fireplace. Julius Mihlein, Cincinnati, Owner; J. C. Grunkemeyer, Architect; A. Schirmer, Builder.



Fred C. Medicus, Youngstown, Owner and Architect; Geo. F. Hartman, Builder.

Library Fireplace, Marble and Wood. Geo. H. Leyng, Cleveland, Owner.



H. Casey, Cleveland, Owner, Architect and Builder.

W. H. Nilges, Cleveland, Owner. Reynold Hinsdale, Architect; Caenstone Tudor Design. Modeled and Cast by Fischer & Jirouch Co.

Allen House, Cleveland, Owner; Abram Garfield, Architect.

Mrs. A. S. Chisholm, Cleveland, Owner; Abram Garfield, Architect.

Fireplace in Educational Model Home, Belvoir-Green; Maier & Walsh, Architects; Dunlap & Johnston, Builders.

Fireplace in the Residence of Dr. C. J. Broeman, Forest Hills, Cincinnati; J. C. Grunkemeyer, Architect; A. Schirmer, Fireplace Contractor.

second, that the proper equipment be used in the internal construction. On the last few pages of this book you will find illustrations and descriptions of the fireplace equipment necessary to carry out the construction plans shown elsewhere in the book. This equipment can easily be had from your local Building Supply Dealer. At this point we would like to insert a word of warning. Do not take it for granted that other equipment will work well with these plans, nor that this equipment will work well with other plans, for such may not be the case. The two combined, however, will produce a successful fireplace.

To those who are deep in the fascinating task of planning a new home and who desire a charming fireplace with its undying sentiments and traditions of history, we submit these designs and plans.

If on looking through the designs in this book any owner desires further information on materials used in a fireplace or sizes, we will endeavor to furnish this information when at all possible. We are also pleased at any time to confer with prospective home builders, architects or contractors on any problem relating to fireplace construction. This service is offered without charge.

One point further we would again like to call to your attention and that is that fireplaces need not be confined to the living room. Some of the oldest homes in America have fireplaces in the dining rooms and bedrooms spreading cheer and comfort in these rooms. Of late years since the advent of the oil and gas burning heating systems, the basement has been converted into a recreation room for the children or a billiard room. It is a very simple matter and adds very little to the cost to install a fireplace in the basement. When men folks gather together, it makes an ideal, cheerful lounging room. In many cases the walls of such basement rooms are hung with hunting and fishing trophies.

Another architectural adaptation is the open-air fireplace. There is nothing modern about the fireplace in the outside chimney. Several places in Europe on old estates there are beautiful out-door fireplaces. And still another unique fireplace is the one built on the open porch. In late summer what could be more pleasant than a cheerful out-door fire on a screen porch? The greater the use of the fireplace in the modern home, the greater the cheer and comfort for the owner.

It is our sincerest hope that you will not let formal correctness of design or lack of information stand between you and a frequent and cheery blaze on your hearth. It is our wish that your fireplace will ever invite you to kindle the glowing coal and the crackling log and that you may always have the fellowship of the fireside in your home.

H. T. Jeffrey, Cleveland, Owner and Architect.

Tile and Wood Fireplace; Thomas H. Henkle, Detroit, Owner.

Marble and Wood Fireplace. Opening, 40-inch. E. F. King, Bay Village, O., Owner and Builder.

J. B. Clark, Cleveland, Owner, Designer and Builder.

H. P. Bennett, Cleveland, Owner; H. L. Beavis, Designer and Builder.

Bedroom Fireplaces

The designs shown on this and the following page are of fireplaces particularly well adapted to bedrooms.

The bedroom fireplace has had a rather unusual career. Many old English homes without heating systems employed the fireplace as an actual heating unit in the bedroom. It was customary for servants to start the fire in the early morning before the occupant was out of bed. This same custom prevailed in America in early Colonial days. In the nineteenth century the practice of having a bedroom fireplace died out. At the beginning of the twentieth century the bedroom fireplace again came into its own, and today the fireplace is being used consistently in bedrooms of the finer class of homes.

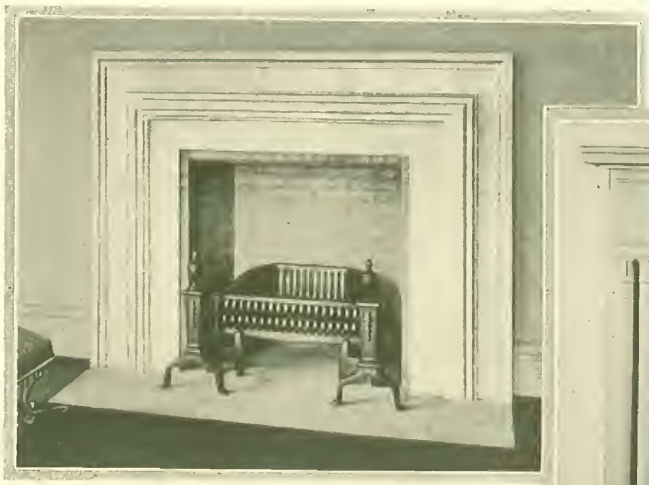
Some homes have a wood lift or elevator running from the basement to the bedroom at the side of the fireplace which together with an ash dump and chute provides quick means of building the bedroom fire and disposal of the ashes afterward.

In designing or choosing a bedroom fireplace the chief point to keep in mind is that the fireplace should be smaller than the average living room fireplace and should be much lighter in treatment. Frequently the bedroom fireplace has no mantel shelf or but a very narrow mantel if any.

When properly constructed, the fireplace in the bedroom can be made to operate just as efficiently as that in the living room. There is no reason why the bedroom fireplace cannot be both beautiful and practical.

Fireplace in the Home of Sid Rosenblum, Cleveland; Bedroom Fireplace, with 29-inch Opening.

Home of C. J. Broeman, Cincinnati; J. C. Grunkemeyer, Architect; A. Schirmer, Fireplace Contractor.



Bedroom Fireplace. Tile and Wood. Opening, 35 Inches. Alger & Knowlton, Cleveland, Owners and Builders; Chas. Schneider, Architect.

Bedroom Fireplace, Marble. W. H. Nilges, Cleveland, Owner; Reynold Hinsdale, Architect.

Bedroom Fireplace, Tile and Wood. Width of opening, 30 Inches. Stiles Smith, Cleveland, Owner; Dunn & Copper, Architects; Weibenson Co., Builders.

Bedroom Fireplace. Carved Wood Mantel, Caenstone Liner. W. D. Will, Cleveland, Owner; E. F. Kline, Builder.

Library and Den

W. H. Nilges, Cleveland, Owner; Reynold Hinsdale, Architect. Library Fireplace.

Brick and Wood Study Design. Opening, 48 Inches. Walker H. Nye, Cleveland, Owner. Dunn & Copper, Architects; C. A. Thompson, Builder.

Early American Study Design. Brick and Wood. Opening, 44 Inches. J. H. Thompson, Cleveland, Owner. Dunn & Copper, Architects, Fred Webb, Builder.

Library Fireplace. Ernest S. Barkwill, Cleveland, Owner; Chas. Schneider, Architect.

On the Porch and in the Basement

Porch Fireplace, Brick. Courtesy of Common Brick Manufacturers' Assn.

Dr. B. S. Rothwell, Cleveland, Owner; Munroe Walker Copper, Jr., Architect.
Basement Fireplace.

Basement Fireplace (Stone Taken from Estate). Width of Opening, 48 Inches. William Tonks, Cleveland, Owner; H. O. Fullerton, Architect; Hinig Co., Builders.

For Summer Cottages

Many summer cottages, resort hotels and cabins in the mountains and woods are today being constructed with beautiful, rugged stone fireplaces. These fireplaces can be made practical and fire-safe, as well as beautiful.

Cabin or cottage owners or those expecting to build a cottage or cabin themselves can find complete instructions on how to build a successful fireplace in section entitled "Fireplace Building for Amateurs." (See Index.)

Fireplace in Cottage of Lacey Sergent at Walloon Lake, Michigan. Opening 5 Feet, 3 Inches.

Fireplace in Bigwin Inn, Bigwin Island, Ont., Can.

Stone Fireplace in Dining Room of Bigwin Inn, Bigwin Island, Ontario, Canada.

—And Cabins

Stone Fireplace in Country Home, Opening, 48 Inches. L. D. Cull, Brecksville, Owner; A. E. Skeel, Architect; R. E. Woodley, Builder.

Fireplace in Country Home. Geo. L. Drofan, Mansfield, Owner; Louis Andre Lamneux, Architect; Tengley Bros., Builders.

Large Cabin Fireplace of Stone. Width of Opening, 47 Inches. Tom Knight, Brecksville, Owner, Designer and Builder.

Fireplace in the Cabin of Judge F. R. Shaw, Sandy Lake, Lakehurst, Ontario

In Public Buildings

Fireplace in the Kindergarten at Fairmount School, Denver, Col.; Harry James Manning, Architect.

There is a wide-spread trend today to use fireplaces in all manner of public buildings. Many of the finest business structures in the world have fireplaces in important offices and in their directors' room. These fireplaces have given austere offices a homelike atmosphere.

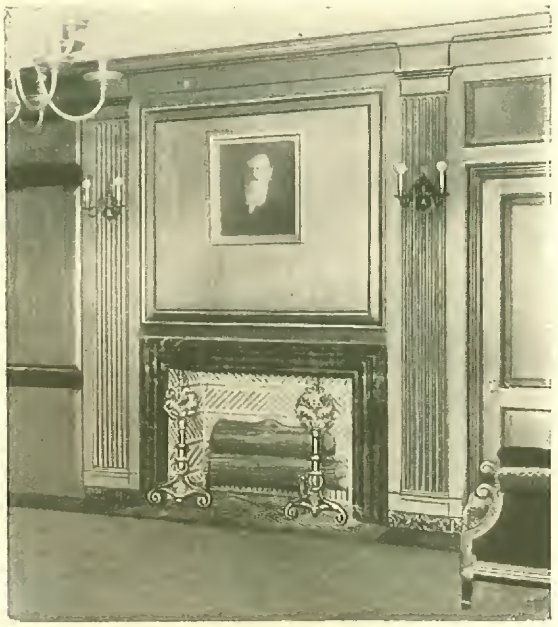
These are not "dummy fireplaces," but are completely equipped throughout and will burn logs. There is no reason why a beautiful office cannot have a cheerful, crackling log fire. The construction of the office fireplace is identical with that of fireplaces for the home, with the exception of flue arrangements.

The public building fireplaces shown on page 27 were selected at random and typify the style of treatment used in offices in some of our largest public buildings. We particularly want to call attention to the kindergarten fireplace shown on this page. This is an unusually well done piece of work. It might well serve as an inspiration for fireplace treatment in a nursery or a children's play room.

Office in Terminal Tower Bldg., Cleveland.

Office in the Ohio Bell Telephone Co. Bldg., of Cleveland, Ohio. Hubbell & Benes, Architects.

National Union Fire Insurance Office, Pittsburgh, Pa. Abram Garfield, Architect; Grange Construction Co., Builders.



Michigan Mutual Life Insurance Co., Detroit, Owner. Smith, Hinchman, Grylls Co., Architects.

Apartment Houses

Many people are of the opinion that fireplaces cannot be built successfully in large apartment houses. A recent survey shows that not only many of the leading apartment houses of the better type have fireplaces but that hardly any of the better class of apartment houses being built today are constructed without them.

The wood-burning fireplace can be just as successfully built in large apartment houses as in a single dwelling. Not only is it practical and decorative, but actual figures from leading apartment house owners and renters show that the rental value of an apartment with a fireplace is considerably higher than that of the apartment without fireplaces.

One realty concern says that the fireplace in itself has an actual rental value of $200 per year. Another apartment owner says that few clients will even consider a new apartment of six or more rooms without at least one fireplace. In the cooperative type of apartments the wood-burning fireplace is absolutely essential. In New York City, for example, it has been proven that of two apartment houses of equal rental value, one having fireplaces in the living rooms and the other none, that almost the entire building of the first can be rented before a single apartment in the second building.

Apartment fireplaces demand the same care in selecting the design and the same care in the designing of the internal construction of the fireplace as that of the fireplace in a single residence.

The only difference between the fireplace in the single residence and the apartment house might be that of size. Frequently the apartment house living room is smaller and needs a smaller fireplace both from the standpoint of the actual size of the fireplace and from the standpoint of decorative features of the fireplace.

Too, they should be equipped with the latest and most efficient type of fireplace equipment.

If you are considering building an apartment building or entering into a cooperative apartment, make sure that the fireplaces in the living rooms of each apartment are of a high type, properly constructed for the burning of wood or coal. To omit fireplaces in apartment houses being built today is to omit a vital factor in making the suites in that apartment rent easily and quickly.

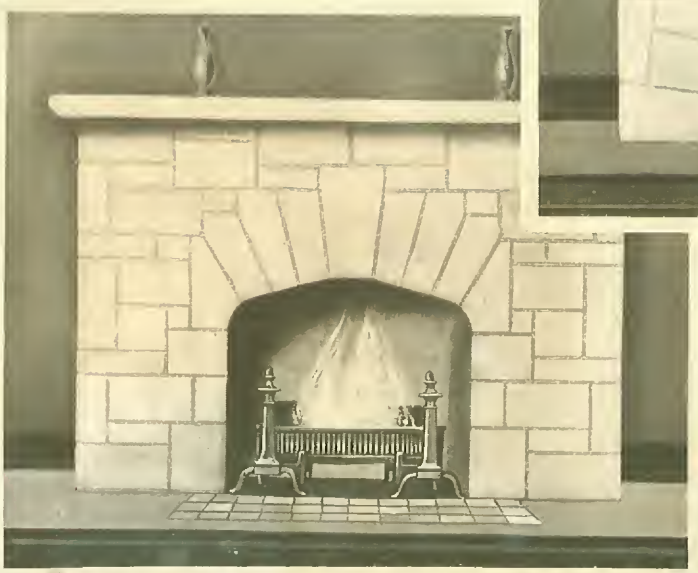
Apartment of C. R. Cummins, Lake Shore Apartment Hotel. Frank Baile, Architect; John Gill & Sons, Builders.

Ready-Made Fireplaces

There are many concerns that are manufacturing ready-made or cast stone fireplace fronts with or without mantel shelves. These standardized fireplace fronts are usually well designed and good looking.

By making a mold to a popular fireplace size in a standardized design these fireplace fronts are produced in quantities at considerably less cost than if only one of each design were made. The materials imitated are brick, various kinds of stone in rough or smooth texture and carved. In many cases elaborate designs are produced.

The ready-made fireplace is readily adapted to the Donley Fireplace Construction Plans and proper fireplace equipment. Their openings generally conform to accepted practice. Donley Fireplace Equipment should also be used with the ready-made fireplace to assure successful operation with freedom from smoke and soot.



These Two Ready-made Fireplaces Were Designed and Built by the Geo. D. Barriball Co.

Donley Fireplace

BEFORE going into details of these fireplace construction plans, we want to first of all dispel from your mind any idea that you may have that the internal construction of a fireplace is a matter of good luck or that there is anything mysterious in that part of the fireplace that lies behind the mantel. On the contrary, fireplace designing is based upon a few simple, easily understood principles, which if correctly applied insure a successful fireplace.

There are five essential requirements in fireplace construction to keep in mind in connection with these construction plans: First, the proper combustion of fuel, be it coal or wood; second, the discharge of all smoke and other products of combustion up the chimney; third, the radiation of the greatest amount of heat in proportion to the fuel used; fourth, the simplicity in the construction of the fireplace; fifth, that sheet metal linings, ducts, grills, etc., are of doubtful lasting quality and are both expensive and unnecessary in the building of a fireplace. They do not add enough efficiency to the fireplace to warrant their use.

The first thought in building a fireplace should be on its location. Because it is a most ornamental feature inside the home it should be given a prominent position in the decorative scheme. Many builders prefer an outside end wall of a room for the location of a fireplace. However, a great many other builders contend that the side wall, either outside or inside, is a better place because it gives a more uniform distribution of heat, whereas heat from the end wall fireplace sometimes fails to reach the other end if the room itself is large. The side wall generally provides more room for a family gathering around the fireplace.

Still another factor in favor of the longer side of the room is from the standpoint of appearance. The larger side of the room could appropriately have a somewhat larger fireplace than the small side. For instance, a room 14x24 feet could have a slightly larger fireplace on the 24-foot side than on the 14-foot side.

In deciding the location, it is well to con-

Photograph No. 1. Photograph showing mason starting the fireplace. The rough brick work has been finished. The top of rough opening is arched although many builders use angle iron instead. Above and back of arch is funnel-shaped smoke-chamber as shown by dotted line in Figure 1, Page 32. Notice the metal splaying the side walls. Details of this angle shown in Figures on Page 32. The Donley Ash Dump is in floor of fireplace at the back. The crated damper is leaning against wall.

sider whether you will have the fireplace built into the room or whether you want to preserve this room space and build your fireplace out from the building side wall. The inside fireplace means a loss of 7 to 15 square feet of floor space, depending upon the size of the fireplace. Building the fireplace outside saves this space and improve the outside appearance of the house, but the cost is somewhat higher.

If it can be avoided, it is best not to have the fireplace in the line of travel through the room or near the entrance door, or where a cross draft sweeps it. Regardless of the position of the fireplace in the room, remember that it must not extend out far enough to cut down the useful width or to make it necessary to lay a floor rug or other covering on the hearth.

Size of the Fireplace

Many a time the new home builder who has seen an immense fireplace in a stately, quaint old Colonial home duplicates it in his smaller residence and finds his fireplace entirely out of proportion to the size of the room. A fire that would fill such a fireplace would be much to hot to suit the size of the room, and the larger chimney and fireplace opening would cause an exhaustion of air from the room, consequently, a forced indraft from the doorways, windows, crevices, etc.

This action also causes more rapid combustion and wastes fuel. It is good advice to plan on a moderate-sized fireplace. A living room with 300 square feet of floor space is well

Photograph No. 2. In this photograph the mason is shaping back wall forward to give better radiation of heat and to form smoke-shelf. The Poker Control Damper uncrated at left.

served by a fireplace 30 to 36 inches wide. Fireplaces 42, 48, 54 and 60 inches in width should be constructed only in rooms of correspondingly greater dimensions.

There are two other points to consider in the relation of size of fireplace to size of room. First, if there is no other auxiliary heating unit, a somewhat larger fireplace can be used. If there is a strong supplementary heating system, the size of the fireplace should be reduced so that too much heat is not given off.

In suggesting the size of fireplace appropriate to the size of the room, we have indicated width of opening only. The table on page 33 gives complete dimensions for a fireplace of any chosen opening.

Construction Sketch

Specific Dimensions for Various Size Openings Are Given in Table on Page 33

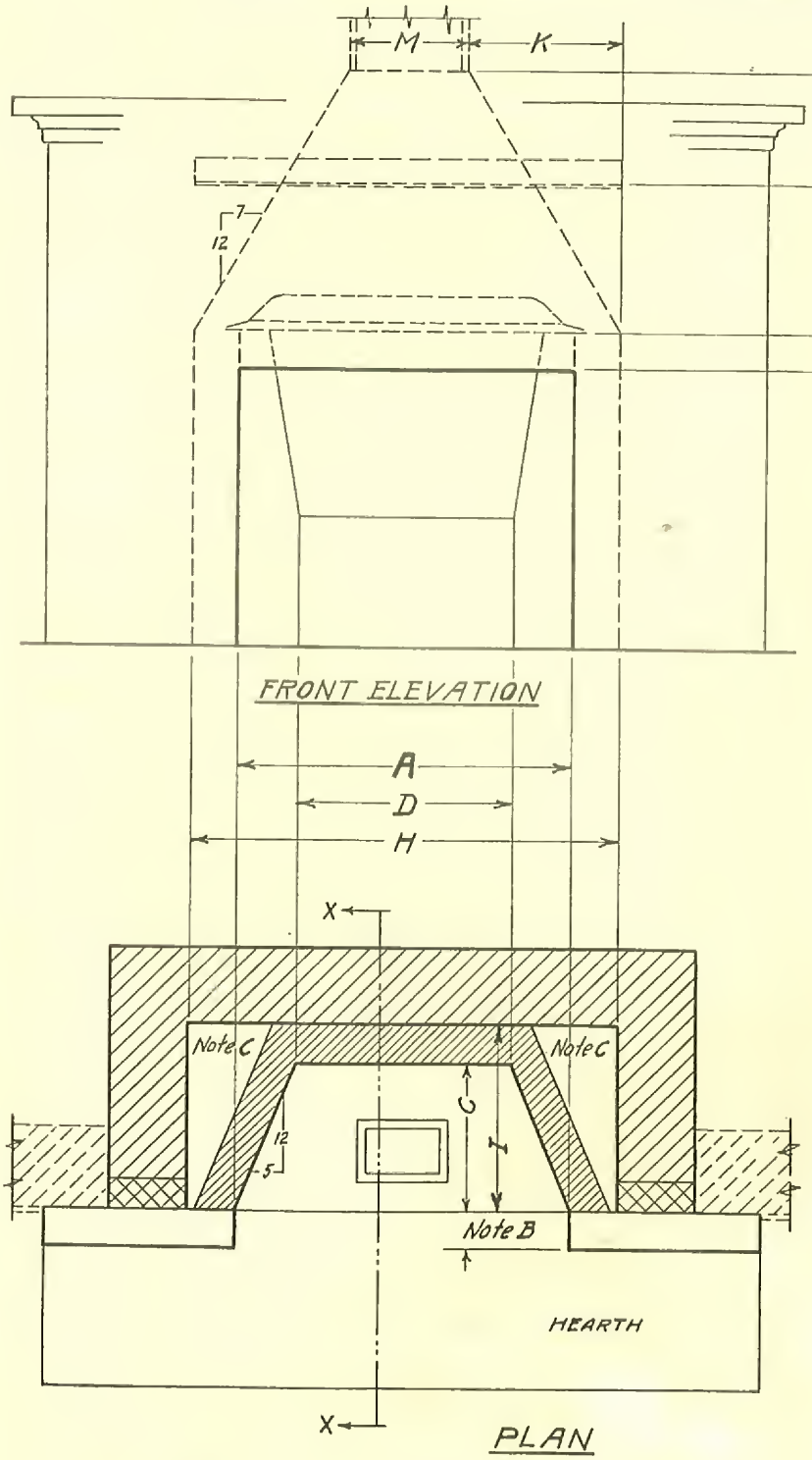
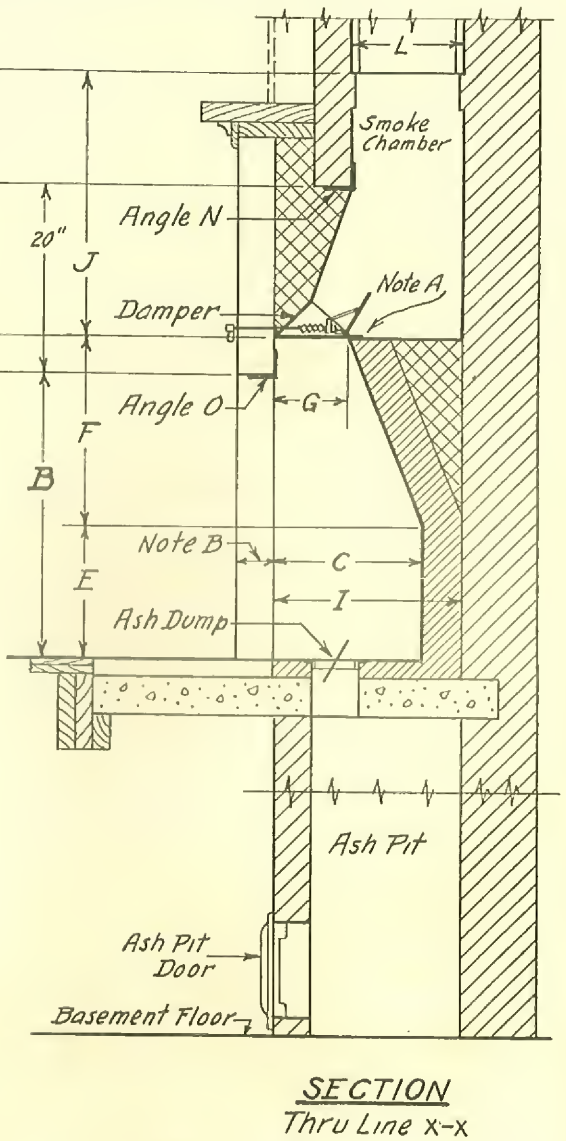


Figure 1



SECTION
Thru Line X-X

Figure 2

A—The back flange of the damper must be protected from intense heat by being fully supported and shielded by the back wall masonry.

B—The drawing indicates thickness of brick fireplace front as 4". No dimensions can be given for this because of various materials used such as marble, stone, tile, etc., all of which have varying thicknesses.

C—These hollow spaces should be filled to form solid backing. If desirable to include a furnace flue in either space, outside dimensions should be increased.

The illustration above shows a rotary control damper installed. At the bottom of the page is an enlarged illustration showing details of the mechanism of both rotary and poker control dampers.

Importance of the
Donley Table of Fireplace Dimensions

Before giving any dimensions of the fireplace we want to say here that practically every part of the fireplace bears a definite relation to every other part. Failure to observe these relationships has been one of the reasons for so many fireplace failures. We are giving below a complete Table of Dimensions that covers the finished fireplace opening, the rough brick work and equipment and accessories for typical sizes of fireplaces. In the following information we shall refer frequently to the Table of Dimensions. It is extremely important that the mason should follow these dimensions as closely as possible.

The first two columns in the Table of Dimensions, A and B, give the width and the height of the finished fireplace opening. In planning your fireplace, first of all determine the size of fireplace opening you will have, based on the size of the room in which the fireplace is to be built. Then by selecting this size in the left-hand column you can proceed to determine the dimensions of the other parts by reading from left to right across the Table. Intermediate sizes will, of course, require a little adjustment of dimensions.

Notice that in the upper part of the columns of figures are the letters A, B, C, D, etc. These letters are also shown on the drawings on Page 32 and indicate the location of the part for which the dimensions are given.

Relation of the Fireplace Opening
to the Area of the Flue Lining

There is a definite relationship between the

Table of Dimensions

DIMENSIONS													EQUIPMENT								
Finished Fireplace Opening							Rough Brickwork						Accessories						Furnishings		
Width	Height	Depth	Back	Vertical Back Wall	Sloped Back Wall	Throat	width	depth	smoke chamber	slope of smoke chamber	Std. Rectangular Flue Lining outside dimension	Std. Round Flue Lining inside diameter	Damper Rotary Control	Damper Poker Control	Ash Dump	Ash Pit Door	Angle N 4"x3"x¼"	Angle O 4"x3"x¼"	Fire Basket	Fire Screen	Andirons
A	B	C	D	E	F	G	H	I	J	K	L M	ϕ					Length	Length			
In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In. × In.	In.	No.	No.	No.	In.×In.	In.	In.	No.	No.	No.
24	28	16	11	14	18	8	37	20	24	14	8½ × 8½	10	324	224	58	10×12	36	30	—		
28	28	16	15	14	18	8	42	20	25	14½	8½ × 13	10	330	230	58	10×12	42	36	24		
30	30	16	17	14	20	8	42	20	25	14½	8½ × 13	12	330	230	58	10×12	42	36	28		
34	30	16	21	14	20	8	46	20	28	16½	8½ × 13	12	336	236	70	10×12	48	42	30		
36	30	16	23	14	20	8	46	20	28	16½	13 × 13	12	336	236	70	10×12	48	42	34		
40	30	16	27	14	20	8	50	20	32	18½	13 × 13	15	342	242	70	10×12	48	48	34		
42	30	16	29	14	20	8	54	20	35	20½	13 × 13	15	342	242	70	10×12	54	48	34		
48	33	18	33	14	23	8	59	22	40	23	13 × 13	15	348	248	70	10×12	60	54	40		
54	36	20	37	14	26	12	67	24	42	24½	13 × 18	18	354	254	70	12×15	66	60	40		
60	39	22	42	14	29	12	71	26	45	26½	18 × 18	18	360	260	70	12×15	66	66	—		
72	40	22	54	14	30	12	83	26	56	32½	18 × 18	18	372	272	70	12×15	80	80	—		

This table is to be used in conjunction with the sketch on the opposite page. Listed in the extreme left-hand column are various sizes of fireplace openings. For any one opening, the complete, recommended list of dimensions for that fireplace may be obtained by studying the columns to the right, each of which is labeled and in addition designated by some letter. These letters refer to the dimensions in Figure 1, which are indicated by corresponding letters

size of the fireplace opening and the size of the flue which should be carefully considered. The size of the fireplace should be settled before the chimney is built. If, however, the chimney is built first, then the size of the fireplace opening will depend upon the size of the flue in the chimney.

Many fireplaces are useless because the flue is too small in proportion to the size of the opening. The best rule in determining the size of the fireplace opening and the size of the flue is to secure the area of the fireplace opening, then see that it is not more than 12½ times the net area of the flue section. Another way of stating this is that the net inside area of a flue should be 8 per cent of the area (the width times the height) of the fireplace opening. Better have the flue too large than too small; the damper can regulate the first, but the second is ruinous to the fireplace.

For example, let us suppose that your room area requires a fireplace opening 30 inches wide and 30 inches high.

Table of Dimensions, showing areas of Standard Flue Linings as established by Eastern Clay Products' Association:

Rectangular		Round	
Outside Dimensions of Flue Linings, Inches	Inside Cross Sectional Area of Flue Linings, Sq. In.	Inside Diameter of Flue Linings, Inches	Inside Cross Sectional Area of Flue Linings, Sq. In.
4½x 8½	23.56	6	28.27
4½x13	38.19	8	50.26
7½x 7½	39.06	10	78.54
8½x 8½	52.56	12	113.0
8½x13	80.5	15	176.7
8½x18	109.69	18	254.4
13 x13	126.56	20	314.1
13 x18	182.84	22	380.13
18 x18	248.06	24	452.3

Rectangular No Allowance for Radial Corners

Consulting the Table of Dimensions given on Page 33, first two columns 30 by 30, we find that under "L" and "M" reading from left to right, that the standard rectangular flue lining should be 8½ by 13 inches, or a 12-inch diameter flue lining if you use a round flue. Here is how it is determined. The area of the fireplace opening is 900 sq. in. The inside area of the smallest flue that can be used should be 900 times .08, or 72 sq. in. The commercial lining nearest this area is 8½ by 13 inches, or a net area of 80 sq. in.

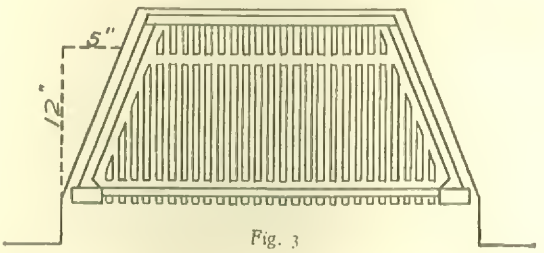


Fig. 3

Illustrating desirable splay of side walls of fireplace. Fireplace basket shown in position.

If you are using any of the dimensions given in the first two columns of the Table, it is not necessary for you to figure this out. Simply consult the column under "L" and "M," or "Φ" in case you are using a round flue.

These dimensions are based on fireplaces built according to our plans and are not necessarily applicable to those built by other plans.

Fireplaces which have openings higher in relation to their width than those shown in the Table of Dimensions require a greater draft to carry off the smoke. Under such cir-

Photograph No. 3. The side and rear fireplace walls of narrow Roman brick completed ready for damper. Note interesting effect of soldier course of Roman brick. The back wall sloped forward is held by temporary support. This forward slope in cross-section and use of fire brick for back and side walls, a common practice, are shown in Figure 2 (Page 32).

cumstances it is necessary to make the flue larger in proportion to the fireplace opening than the 8 per cent proportion mentioned above.

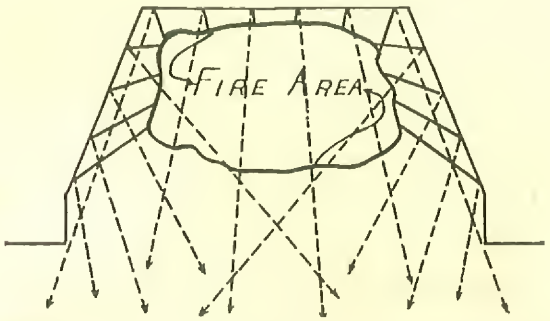


Figure 4

Illustrating heat radiation from a fireplace, having properly designed side and rear walls

In considering the flue areas, it is well to remember that a square or oblong flue has corners which are practically dead space. Therefore, the effective area in a square or oblong flue is less than the geometric area.

The cross sectional area of the flue should be maintained throughout its height. If it is made smaller at any part for any reason, the result is the same as if it were all built the size of the smallest part.

The ideal flue has a circular section, owing to the tendency of smoke to ascend in a spiral column. This means that there is practically no dead space. The next best is a square or nearly square section. A markedly oblong section should have a factor of safety in its sectional capacity. Square and oblong flue linings permit of easier, less expensive masonry work.

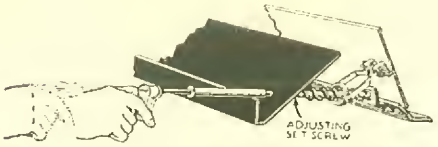
Flues that slope to one side to reach a main chimney should do so at an angle of 30 degrees from perpendicular. More than 45 degrees is dangerous.

Shape of Fireplace Opening

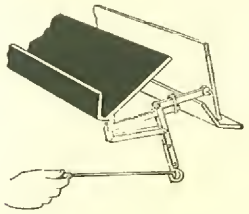
Under this heading we want to discuss the best dimensions of the fireplace and the reason for a definite fireplace shape. Let us warn our readers, however, that the drawings shown in this book will not work under all variations. The figures shown here are for one certain size. Do not conclude that for larger fireplaces it is only necessary to enlarge the dimensions shown in these figures. Use the Table of Dimensions, Page 33, as a guide in changes of size.

Notice particularly that the fireplace width is the principal variable. The height of

Photograph No. 4. The Damper has now been set in place. The rear flange of the damper rests on the sloping back wall that helps form the smoke-shelf. In this photo the damper is set further back than usual to allow for stone facing.



Rotary Control Damper. This damper is opened or closed by a turning handle that protrudes through the mantel front. The operating rod is adjustable and can be cut off at required length.



Poker Control Damper. Diagram shows how this damper is controlled by hooking an ordinary poker into the device and pushing or pulling until desired position is reached.

the fireplace opening is pretty well fixed in practice as from 30 to 34 inches, probably in deference to the height of the frame and also with some view to proper mantel height.

Fireplace depth is determined to a certain extent by wall depth or by the feasible projection into the room. The depth of the finished fireplace opening (Fig. C in Table of Dimensions) runs from 16 to 22 inches, while the depth of the rough brick work (Fig I, Table of Dimensions) runs from 20 to 26 inches. There is little advantage of greater depth for larger fireplaces. A shallow one throws more heat than a deep one. There are no advantages in especially high or deep fireplaces, but there are many disadvantages. If your room requires a larger fireplace, make it wider and vary the depth only to a minor degree. It is best to use the sizes given in the Table of Dimensions.

In shaping the finished fireplace opening remember that the flame must not be too nearly vertical or much of the heat will go up the chimney. To overcome this escape of heat we recommend (1) that the rear wall be brought forward and (2) that the side walls be splayed. Sidewalls that go straight back from the fireplace front to the rear have square rear corners which create a corner area and waste heat up the chimney.

The wall angle we recommend slants from front to rear at five inches to the foot beginning one course of brick, or about four inches from the fireplace front.

This angle of five inches to the foot is not chosen arbitrarily but has been selected with utmost care after consultation with many successful fireplace builders and the examination of hundreds of plans. It is not our pur-

pose to introduce a special form of fireplace in the interest of Donley Equipment, but we do recognize the desirability of a standardized wall angle, and in the interests of successful fireplaces have taken our own first step in this direction.

Perhaps the same general result may be obtained with a greater or less angle than five inches to the foot, but we have found that this angle together with a sloped back wall helps to form a reflector of heat as shown in Figure 4. It is also correct for the Donley Damper and fits the Donley Fire Basket.

We want to call your attention to Figure 2. There you will see the upper part of the back wall slanting forward to meet the near flange of the damper a few inches across the top of the fireplace opening. This back wall slope is the second consideration in determining the shape of the fireplace. It performs two functions: First, it is a natural heat reflector; second, it also helps form the smoke shelf with which we shall deal later on.

The Damper

To draw off all the smoke and gases from the fire without undue loss of heat requires a correct adjustment in the throat aperture. This can be best effected by means of a dependable damper under easy control. The Donley Damper is made of cast iron, the material best suited to withstand temperature changes and exposure to moisture. Donley Dampers can be secured through your local supply dealer. If he does not carry Donley Fireplace Equipment in stock, he can easily get it.

It has two main parts: One, a rigid, smooth, dome-shaped part; and the other, the movable valve plate by which the opening from fire to smoke chamber is regulated. Connecting these two parts is the device by which the valve plate is operated, opening and closing the aperture as desired.

Photograph No. 5. The opening between damper and rough brick being closed up. The damper acting as a lintel supporting brick work that closes up smoke-chamber. Damper is about 6 inches above top of finished fireplace opening. (See next photograph.)

Donley Dampers are made with two types of operating control, illustrated on opposite page. The Rotary Control Damper is the most convenient, while the Poker Control Damper is less conspicuous.

A great deal of care must be used in seeing: First, that the right-sized damper is used; and second, that it is placed in the best possible position.

Here is the way to select the proper-sized damper. Consult the Table of Dimensions as to the width of the finished fireplace opening, Column A. Then, reading from left to right in the horizontal column, you will find under Damper Rotary Control and Damper Poker

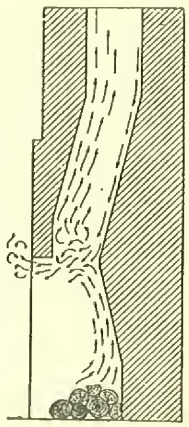


Figure 5. Showing how down-draft causes smoke eddies where smoke-shelf is omitted.

Control the proper number of damper to use. The width of the size of damper corresponds to the width of the finished fireplace opening. If the width is an in-between size, you will have to use the next larger size of damper.

One of the causes of smoking fireplaces is an incorrect damper position. After years of study of successful fireplaces and plans, it is recommended that the damper be placed 3 to 8 inches above the top of the opening (see Figure 6). This is most important since this position offers greater security against smoke eddies and allows for a larger collection of smoke when a fire is first lit, previous to the smoke ascending through the damper and up the chimney. We have seen many fireplaces ruined by dampers being placed on a level with the top of the fireplace opening. A lower position would tend to give slightly more heat, but the danger of fireplace smoking is so great as to render this lower position dangerous to the success of a fireplace.

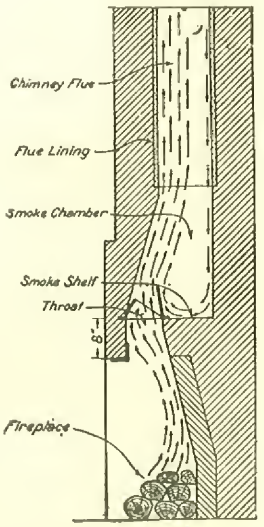


Figure 6. Showing how down-draft is diverted upward from smoke-shelf. This and diagram opposite taken from U. S. Government pamphlet.

Notice also in Figure 6 that the damper is placed at the front of the fireplace against the front wall, and that the back of the fireplace slopes forward to meet the rear flange of the damper. The forward flange of the damper rests against the front brick in the fireplace. This sloping back wall helps form the smoke shelf. The side flanges rest on the side walls of the fireplace. Make absolutely

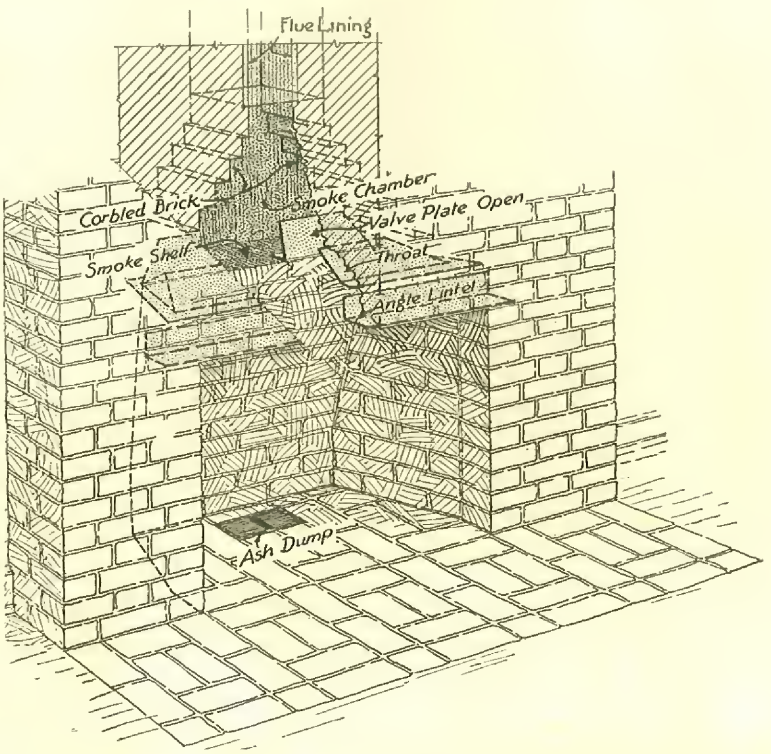


Figure 7

certain in the construction of your fireplace that the damper is placed in this front and forward position—a position which, by the way, is recommended in the U. S. Government Pamphlet No. 1230, Department of Agriculture.

We want to call your attention here to the fact that the damper operating rod for rotary control dampers is adjustable for variations in the position of the damper and the thickness of the front wall of fireplace.

Illustrations show the operating knob of the rotary damper located in the center as usually preferred. With the operating device in this position the valve plate is readily removable. The dampers are supplied with the operating device set to the right of the center when desired, on special order.

Photograph No. 6. The mason putting finishing touches on stone facing around opening. Notice design of Roman brick in hearth as well as side walls. The fireplace is now ready for front hearth and fireplace front.

Smoke Chamber

Notice on Figure 2 the compartment immediately above the damper labeled "smoke chamber." From the fireplace the smoke passes through the damper throat up into the smoke shelf, which has a pyramid-like section on two sides, narrowing to the size of the flue, labeled "M" on the front elevation. Its sides should have a slope of 7 inches in 1 foot of height. If these sides are built at too abrupt an angle, it prevents the smoke from rising readily. The smoke chamber permits smoke and gases free and easy access to the flue lining, which starts at the top of the smoke chamber.

When it is desired to deflect the flue from directly above the center of fireplace, such deflection should start above the top of the smoke chamber. Finish the chamber exactly as though the flue were to be straight and commence the flue slope where it connects with the chamber. Both sides of the smoke chamber should slant toward the center equally; otherwise, the fireplace will draw unevenly on the two sides. The smoke chamber must be large enough and properly-shaped if the fireplace is to work well. Its cubic capacity reduces the violence of draft impulses from above and below, giving it a sort of absorbing function.

Some builders use and recommend a sheet metal smoke chamber, but this is expensive and unnecessary if the smoke chamber is built according to these instructions and plans.

Between the damper and the rear wall of the chamber is a horizontal flat surface called a smoke shelf. In Figure 2 it is indicated by

Note A. Located directly under the flue, it arrests falling soot and acts as a baffle for the down draft, deflecting it upwards in an ascending current instead of forcing the ascending smoke out into the room.

How to Deal with Down Draft

Down draft is present at some time in all fireplace chimneys, due to compensation for updraft from fire, adjusting differences of temperature between outside and inside and to actual winds, or combinations of the three causes. Where the smoke chamber is incorrectly formed and where there is no smoke shelf, or no damper, the down draft will drive part of the smoke back into the room. Many complicated arrangements have been devised for checking down draft. They are not necessary if your fireplace is built according to our plans.

The force of the down draft is arrested and diverted up the chimney by means of the open valve plate of the Donley Damper and in conjunction with the smoke shelf acts as a smoke deflector. (See Figure 2.)

Using the Table of Dimensions

Having read the foregoing instructions, let us suppose you are going to build a fireplace. The room in which the fireplace is to be built has, we will say, 300 square feet of floor space. This means a finished fireplace opening 30″ wide and 30″ high. Referring to our table under column A, the width (a) 30″. Reading to the right, height (b) 30″, the depth (c) of the finished fireplace opening will be 16″. The width of the back wall of the finished fireplace opening (d) 17″. The height of the vertical back wall (e) 14″. The height of the sloped back wall (f) 20″. The throat aperture will be (g) 8″. The rough brick work (h) will be 42″. The depth of the rough brick work (i) 20″. The height of the smoke chimney (j) 25″. The slope of the smoke chimney (k) 14½″. The size of the rectangular flue lining (l and m) 8½″ by 13″. If you are using a round flue lining (o) 12″.

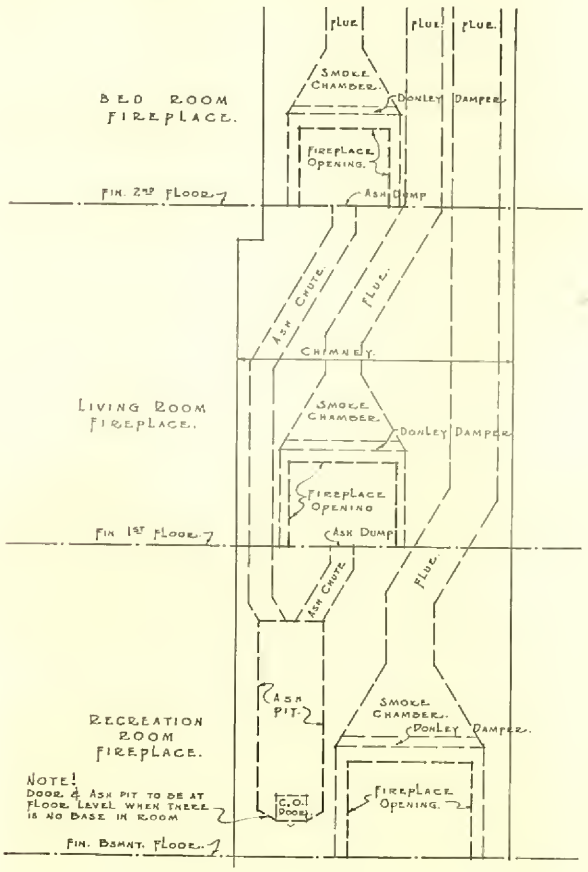
Continuing, for this size fireplace—if you want a rotary controlled damper, use No. 330. If you want a poker controlled damper, No. 230; if an ash dump, No. 58; and an ash pit door 10″x12″; the angle supporting the masonry above brick work, 42″, and the angle supporting fireplace breast opening, 36″.

There we have the complete sizes for a fireplace suitable for a room of 300 square feet. Dimensions for any other size fireplace can be determined in the same manner.

Photograph No. 7. The finished fireplace with panelled wood mantel or fireplace front. Donley Fire Basket and Andirons. I. C. Geist, Owner; E. O. Lauffer, Architect; Clyde A. Prouty, Builder.

The Chimney

The work of the chimney is to make a draft to burn fuel correctly, to carry off combustion products and assist ventilation. Much dissatisfaction with heating plants and their excessive use of fuel is due to poor chimneys. Defective chimney construction also causes a great many fires.



The following are a few suggestions on correct chimney construction:

1. Use good materials.

2. Lay materials flat with proper bonding. Unless the chimney is 10 inches thick, a lining should be used. Rough mortar should be cleaned off the sides of the flue.

3. Rest the chimney on the ground for sufficient foundation.

4. Test the chimney for leaks.

5. Make the inside of the flue the same area throughout.

6. Each flue should have its own installation of clean-out pocket and door.

7. Chimneys next to inflammable material should be at least 6 inches thick.

Under ordinary conditions the best height of the chimney is 25 feet, with at least three feet extending above flat roof, or two feet above the ridge of peak roofs.

For an outside chimney the walls should be 8 inches thick in order to reduce heat losses and air leakage. However, if the chimney has a flue lining and is not any higher than 30 feet, it may be as thin as 4 inches, providing adjacent inflammable material is properly insulated.

Where two flues are in the same chimney it is best to separate them by a dividing wall 4 inches thick. Where the chimney is to be made of stone, it is recommended the walls be 4 inches thicker than brick walls.

In two-story homes where a bedroom fireplace is to be on the second floor, it should have a separate flue. Above the ridge of roofs the draft of a tall chimney is stronger than a short one, which modifies rules for flue sizes.

When the Fireplace Smokes

There are a number of factors that may cause fireplaces to smoke. Among these are:

1. The wrong size of damper. Too narrow a throat, that is, damper not as long as the fireplace opening.

2. Too small a flue. This is perhaps the most frequent fault.

3. Too low a position of the damper and throat.

4. Chimney too low in relation to ridge of roof.

5. Absence or improper construction of smoke chamber.

6. Improperly formed throat; no damper.

7. Trees close to the top of the chimney.

How to Diagnose a Smoky Fireplace

Anyone who has read and understands the plans and details as given in this book can diagnose a smoky fireplace. The causes of fireplace smoking are not so complicated as some folks think. Here is a method of diagnosis.

Before starting your inspection, make sure that the damper is open. It is surprising how often a home owner will report his fireplace smoking when, as a matter of fact, he has forgotten or didn't know how to open the damper.

The next step of our diagnosis is to examine the size of the flue lining. Consult the Table of Dimensions and see whether it is large enough to carry off smoke and gases. Too small or a restricted flue is a frequent cause of fireplace failures.

The next step is to see if the position of the damper is correct. It should be, of course, in the front of the fireplace, the front flange against the front wall and 3 to 8 inches above the breast line.

The next move is to determine whether there is a smoke chamber, whether it is large enough and free from rubbish or other obstructions. Then be sure that back of the damper at the bottom of the smoke chamber is the smoke shelf to deflect down draft back up the chimney. While you are examining the smoke chamber, see if the flue angles off to the right or left at more than 45 degrees.

All of the above being in order, go outside and see if the top of the chimney is at least 2 feet above the highest point of the roof. See also whether there is a big tree close to the chimney top. Either factor causes smoking.

It is seldom indeed that the above diagnosis won't bring fireplace troubles to light. In fact, 98 per cent of smoking fireplace troubles can be found by this close diagnosis method.

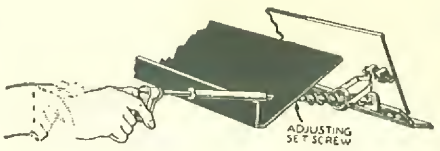
Summary

If you will follow the directions on fireplace building that are given in this book or on the plan sheet that comes attached to every Donley Damper crate and see that the following Donley Equipment is used, the Damper for proper draft action, the Ash Dump for the quick, convenient removal of ashes and an Ash Pit Door for the final removal of ashes, you are assured of a successful fireplace.

Once again let us impress upon the prospective home builder, as well as architects and builders, that a good fireplace does not cost any more than a poor fireplace and that a fireplace may be ever so beautiful, yet be a failure, or it may be built of the simplest of materials, yet be a perfect success.

Finish off your fireplace with a Fire Basket and add the last beautifying touch with a pair of Andirons, screen the fireplace with a Donley Screen and equip it with a Donley Fire Set, and you are assured of a fireplace that will be equally as beautiful as successful.

Donley Fireplace Equipment



Rotary Control

To open or close this damper you rotate the knob that protrudes through mantel front. Diagram shows mechanism. Distance from under side of front flange to center line of operating rod is 1½ inches.

Donley Fireplace Damper

Satisfactory working of a fireplace depends largely on regulating the up draft, allowing no more than is necessary to carry off the smoke. Deflection of the down draft upward into the main smoke current is also important. The valve plate of the Donley Damper, pictured above and below, accomplishes both objects. Hinged at the back, it can be set at the angle required for proper up draft. At the same time it pockets the troublesome downward currents in the rear space over the smoke shelf, deflecting them upward as indicated in Figure 6, Page 38.

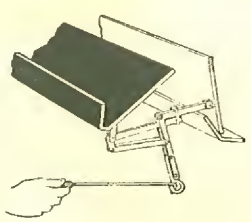
In the interests of simplified fireplace construction, the Donley Damper is made with the front flange vertical. It is installed on top of the back and side walls of the fireplace. The treatment of the fireplace front may then be worked out to any desired effect without the bother of having to make a joint meet the level of the damper. Donley dampers come in two styles as illustrated.

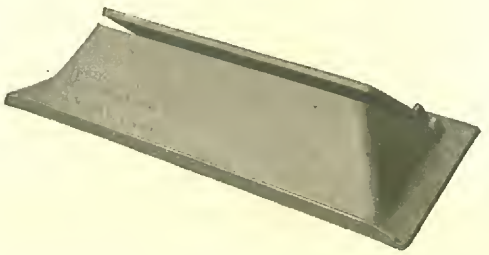
Poker Control	Rotary Control	Throat Size Front	Overall Length	Shipping Weight
224	324	24″	30″	34 lbs.
230	330	30″	36″	36 "
236	336	36″	42″	40 "
242	342	42″	48″	53 "
248	348	48″	54″	56 "
254	354	54″	59″	98 "
260	360	60″	65″	110 "
272	372	72″	77″	150 "

Poker Control

Diagram shows how this damper is controlled by hooking an ordinary poker into ring and pushing or pulling until desired position is reached.

Ring projects 5 inches below flange of damper.





Donley Ash Dumps

Donley Ash Dumps are iron trap doors closing the ash pit and excluding dust and odor from living rooms. They are part of every well equipped fireplace. The doors are locked into a frame to prevent loosening and dropping into ash pit. Dumps No. 58 and 70 have a single door set flush with fireplace floor and are opened and closed with a poker. No. 57 has two slightly recessed doors which close themselves after ashes have been pushed through.

Donley Clean-out Door

Donley Ash-Pit Doors or Clean-out Doors are of original design which promotes strength, neatness and close fit. Larger sizes are used for removing ashes and smaller sizes at bases of chimney flues for removing soot. The 8x10 size is frequently used for removing ashes but the 10x12 is more convenient. Sizes: 7x9; 8x8; 8x10; 10x12; and 12x15.

Donley Ratchet Damper

This damper has poker-controlled valve-plate, also sliding shutter for additional draft adjustment. A good, practical means of draft control, but without throat-forming feature.

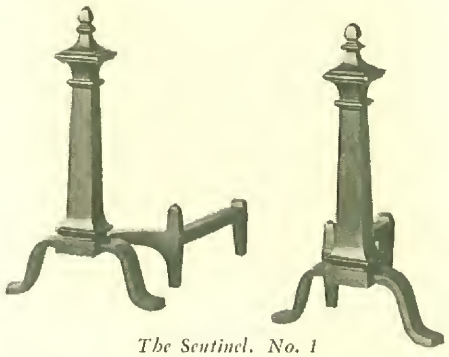
No.	Length Over All Front	Back
124	24″	22″
126	26″	24″
128	28″	26″
130	30″	28″
132	32″	30″
136	36″	34″
142	42″	40″
148	48″	46″

Steel Angles

These angles are used at the top of the rough brick opening and also at the top of the finished fireplace opening. Builders find them to be more economical in the rough fireplace opening than the making of arches. Order these steel angles with the Damper. They may be had in sizes and lengths as follows:

3x3x¼ inches, also 4x3x¼ inches, in lengths 30, 36, 42, 48, 54 inches. For larger fireplaces 4x4x¼ inch angles in lengths 60, 66 and 72inches. Special lengths to order.

Donley Andirons

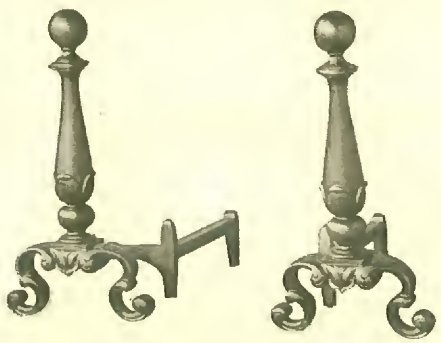


The Sentinel. No. 1

Andirons, as we know them today, have a unique history. No one knows exactly when they were first used, but their origin can be traced back a thousand years. An interesting fact is that the oldest andirons in existence have practically the same shape and structural lines as our modern andirons.

Andirons are the furniture of the hearth. Without them a fireplace would seem as incomplete as a room without furniture. They give a finishing touch of beauty and coziness and add to the comforts and pleasures of winter evenings before an open fire.

In the Donley Andirons you will find beauty culled from the ancient smithy's work united with the grace, simplicity and pleasing charm of modern decoration. They are quiet and dignified in design and harmonize with modern treatments. They are sturdy and strong. The six Donley Andirons are made of high-grade gray iron, cast brass or bronze. Finished in mat black, antique brass and bronze.



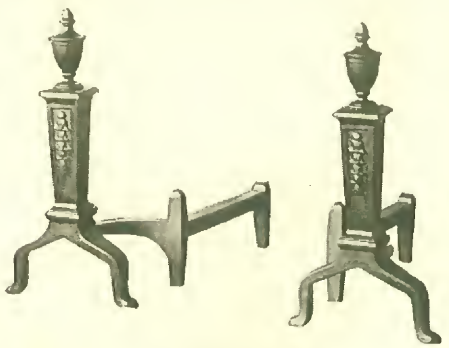
The Regal. No. 2

The Sentinel

Topping its tall, slender figure to the famous steeple top of andirons of yore, combined with modern architectural simplicity and grace, an andiron worthy of a place on the hearth of any American home, it stands 20½ inches high. Finished in antique brass or black.

The Regal

Here's an andiron that reflects Eighteenth Century Andiron style in its correctly proportioned shaft, topped with the characteristic ball. The tulip petals on the shaft give it a modern, unique beauty. Stands 22 inches high. Finished in antique brass or black. Also solid brass or black standard with brass balls.



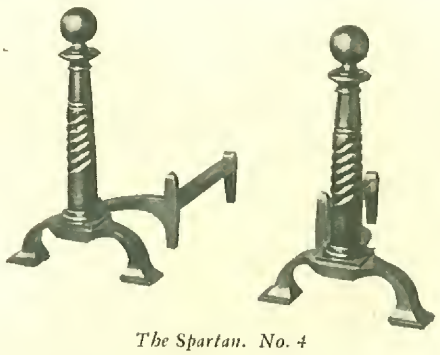
The Windsor. No. 3

The Windsor

The urn standing on top of this design reflects the beautiful old English type andiron. The tapering decorated shaft gives a twentieth century tone to an old design. The Windsor is 18½ inches tall. Finished in antique brass or black, also made in bronze.

The Spartan

This andiron appeals to the conservative.



The Spartan. No. 4

It bears on its shaft the twisted flame design of centuries gone by.

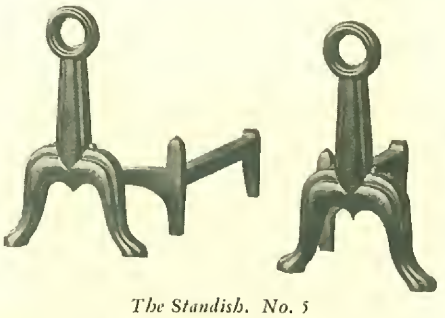
The Spartan reaches a height of 20 inches and is of particularly artistic value in the dignified fireplace. Finished in antique brass or black or black standard with brass balls.

The Standish

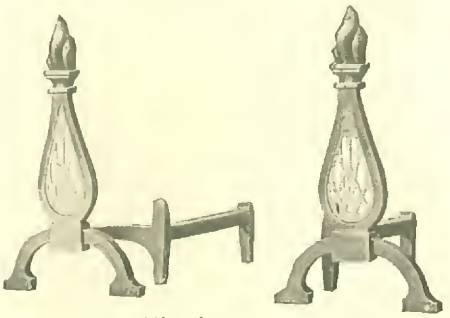
Here too, is a partial replica of earlier days. It is immediately marked as an andiron of early colonial days. The Standish gives grace and charm to the smaller fireplace. It stands 14½ inches high. Finished in antique brass or black.

The Flame

This is a new, exclusive Donley design that has met with unusual favor. The flame motif top with its modernistic center panel makes this andiron particularly well fitted to harmonize with modernistic decorative treatments. It stands 18¾ inches high. Finished in black or antique brass plated—center panel of polished brass.



The Standish. No. 5

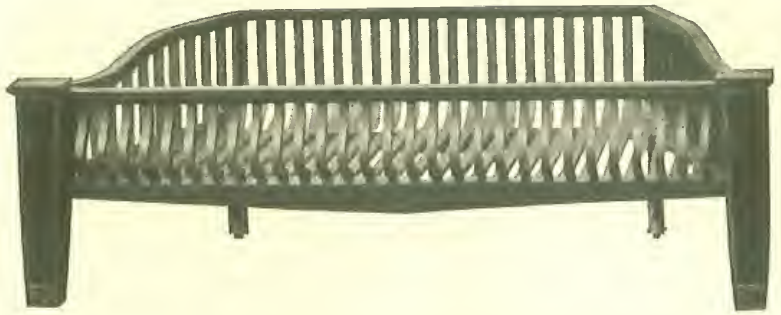


The Flame. No. 6

Donley Dutch Oven Door

In recent years there have been fireplaces built with Dutch ovens. This type of fireplace demands a graceful, strong, clean-cut door. The one shown at the left is the new design that makes an exceedingly attractive Dutch oven. This door harmonizes with any decorative treatment. On page 54 are shown two methods of building Dutch ovens, one with an opening beneath the oven door in which fire is to be built or placed. The other simply shows a recess under the oven, and the coals are placed in the oven itself. Size of Dutch Oven Door: Wall opening, 12½"x 15½". Overall size, 15"x18".

Donley Fire Baskets



After you have built the fireplace according to the plans in this booklet and have installed the Donley Damper, you will want to set off the fireplace with a good-looking Donley Fire Basket. Beauty and utility are combined in the Donley Fire Basket. Its lines are simple, graceful and correct, and its construction sturdy enough to withstand hard usage for many years.

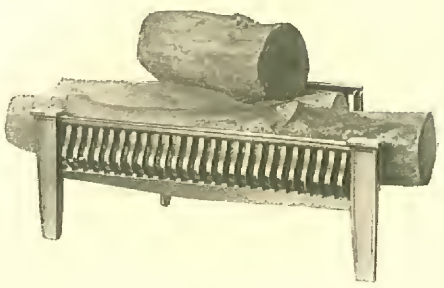
Having no eccentricity of design it harmonizes with any decorative scheme the architect may prefer and is a ready seller for every class of residence. Remove the ends, by lifting them out, and burn wood of any length that the fireplace will take. Construction safeguards against falling out of ends, through warping.

This basket narrows toward the rear at just the degree to fit a properly splayed hearth plan, thereby solving the difficulty that careful fireplace designers sometimes experience in finding a basket to fit their plan.

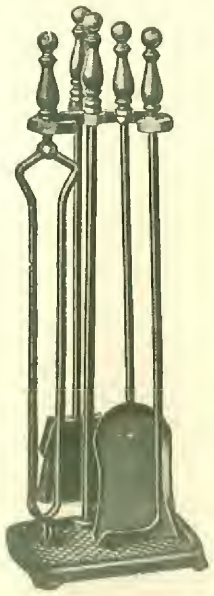
Experience shows that sides splayed at this angle radiate heat into the room more effectually than square-cornered fireplaces. See figure 4, page 35.

Front	Depth	Back	Shipping Weight
24″	15″	12½″	58 lbs.
28″	15″	16½″	64 "
30″	15″	18½″	66 "
34″	15″	22½″	72 "
40″	15″	28½″	86 "

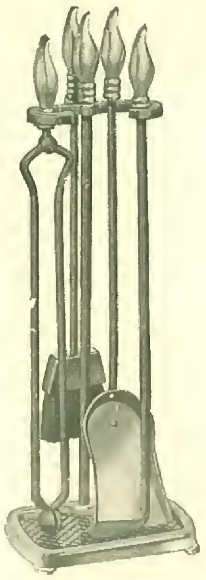
The illustration at the right shows how the ends of the Donley Fire Basket can be removed to care for logs longer than the basket itself. These ends are easy to remove or to replace when it is desired to burn coal.



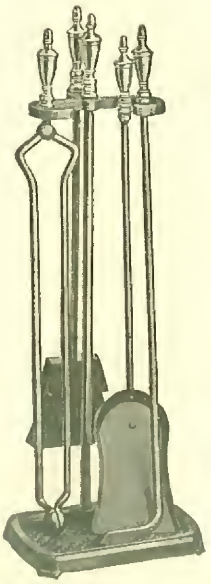
Donley Fire Sets



Series No. 240



Series No. 260



Series No. 250

Colonial style appropriate to a wide range of fireplace and andiron designs. Particularly suited to Regal and Spartan Andirons.

No. 240. Handles in black finish.

No. 242. Handles in antique brass, sand finished.

No. 245. Handles in antique brass, polished.

No. 247. Handles in solid brass, polished.

No. 249. Handles in black, with brass balls, polished.

Flame design handles particularly suitable with Donley Flame Design Andirons.

No. 260. Handles in black finish.

No. 265. Handles in antique brass finish.

No. 267. Handles in solid brass.

English Urn Handles, particularly suitable with Donley Windsor Andiron.

No. 250. Handles in black finish.

No. 252. Handles in antique, brass, sand finished.

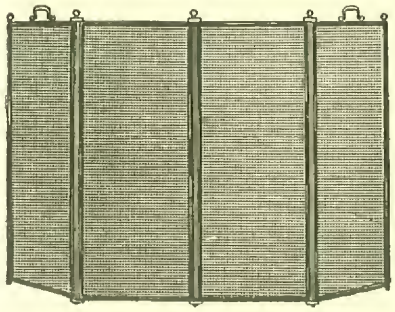
No. 255. Handles in antique brass, polished.

No. 257. Handles in solid brass, polished.

NOTE: Donley Fire Sets are substantially made, with finish of handles to match finish of various andirons. Parts below handles of half-inch round steel, finished in black. Height 30 inches. Sets furnished either with or without brush.

Donley Fire Screens

For fireplaces 24 to 46 inches wide. Folded up when not in use.

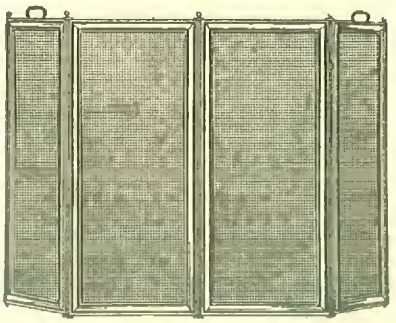


Height, 30 inches. Fold, 12 inches. This screen has a rod frame encased in heavy wire cloth of fine mesh.

No. 200. Black finish.

No. 202. Black with brass handles and knobs.

No. 202-A. Same as 202, but five folds, 36 inches high.

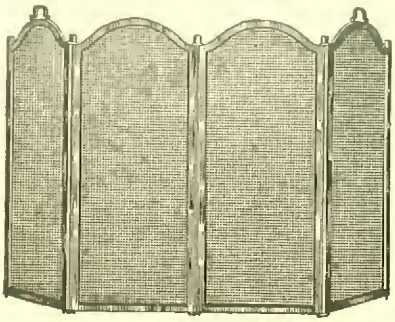


Height, 30 inches. Fold 13 3/16 inches. A moulded frame with fine mesh wire cloth.

No. 210. Black finish.

No. 212. With brass frame, black screen.

No. 214. All brass finish.



Height, 30 inches. Fold, 13 inches.

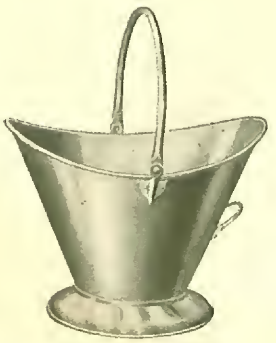
No. 220. Square, solid brass polished, heavy moulded frame with curved top, close mesh, strong black wire cloth.

No. 220-A. Solid brass, same as above, but with antique brass finish.

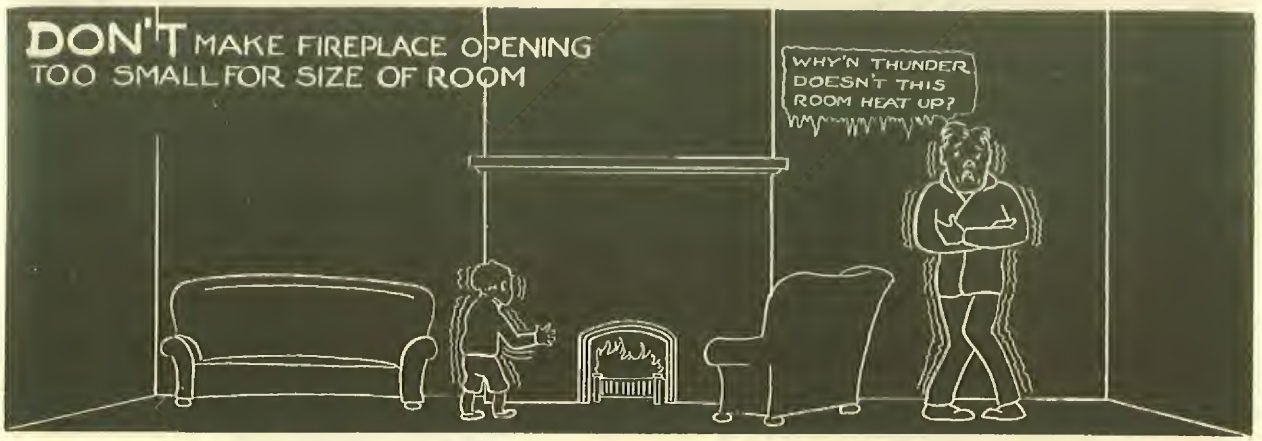
Donley Wood Carrier---Coal Hod

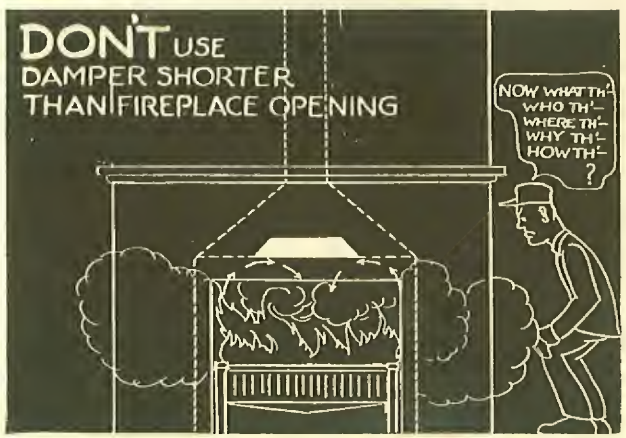
The Donley Wood Carrier is a good-looking, convenient metal carrier. Light as a wicker basket, yet sturdy in construction. Easy to clean. Dirt will not sift through, no fragments break off, easy to carry. Large brass handle.

Donley Coal Hod—graceful in shape, strong in construction, yet light in weight. Attractive and well finished. Large brass handle.



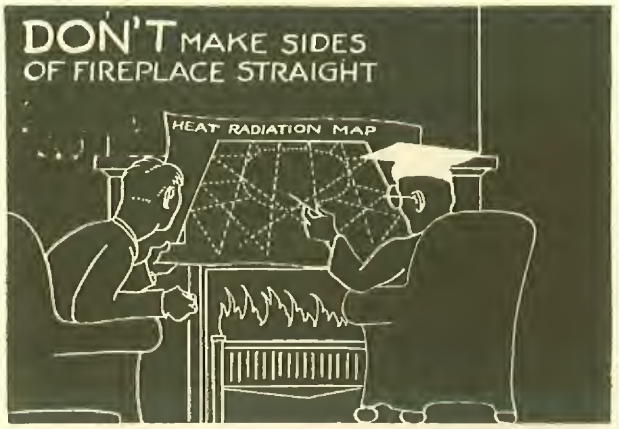
How **NOT** *To Build*



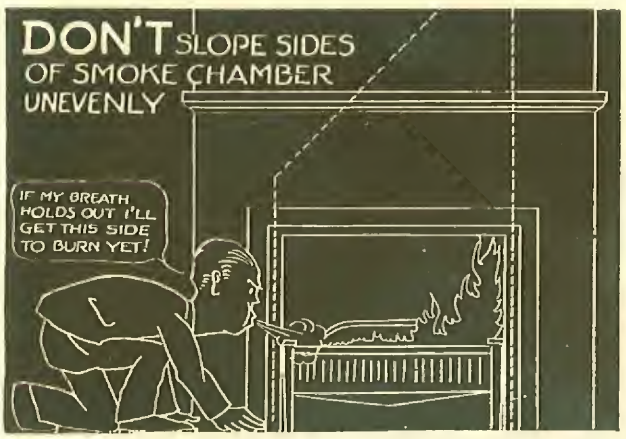


A Fireplace


DON'T MAKE FIREPLACE TOO SHALLOW
THEY MUST'A MADE THE FIREBASKET TOO DURN BIG!


DON'T MAKE SIDES OF FIREPLACE STRAIGHT
HEAT RADIATION MAP

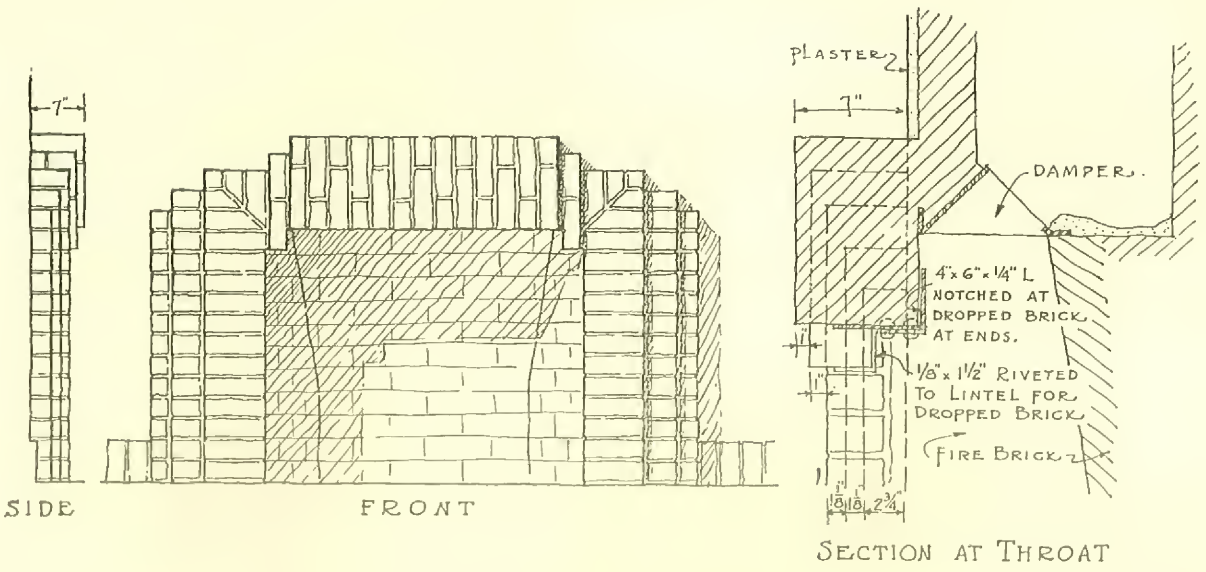

DON'T MAKE FLUE OPENING TOO SMALL FOR SIZE OF FIREPLACE OPENING

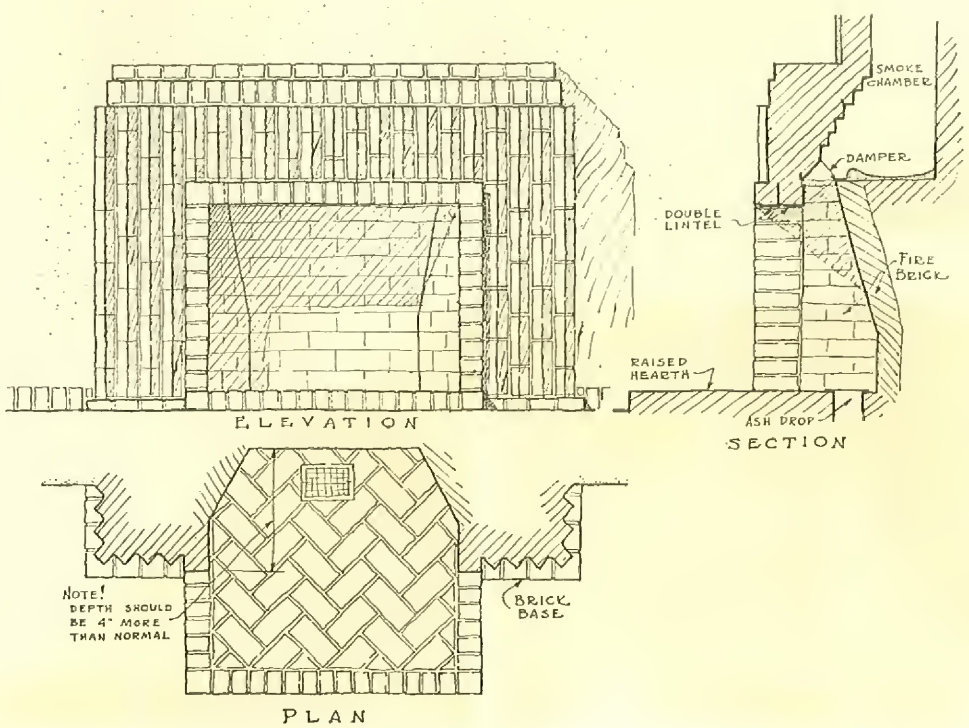

DON'T SLOPE SIDES OF SMOKE CHAMBER UNEVENLY
IF MY BREATH HOLDS OUT I'LL GET THIS SIDE TO BURN YET!

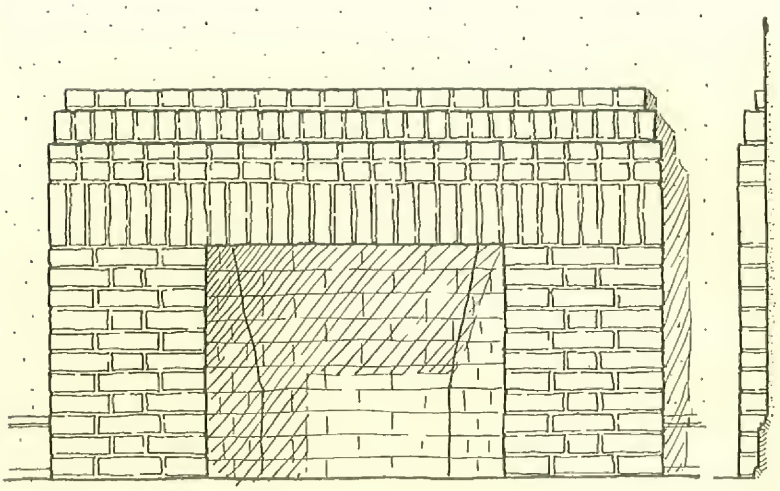

DON'T HAVE CHIMNEYS TOO LOW, NOR HAVE OBSTRUCTING TREES NEAR CHIMNEYS

A Portfolio of Fireplace Designs

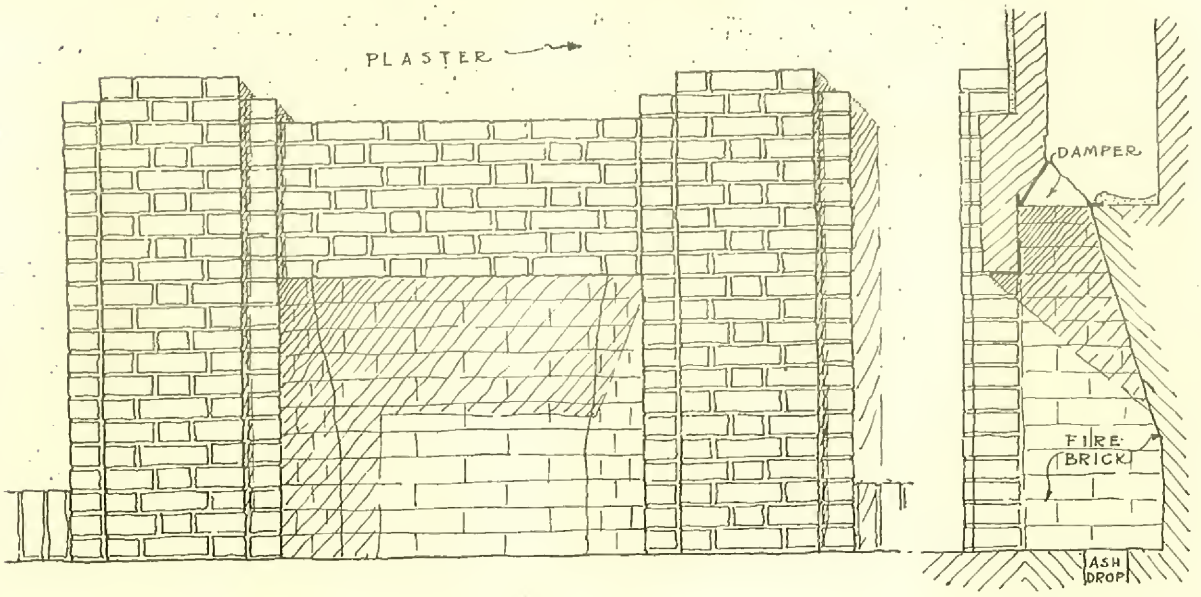
Modern Treatment in Brick



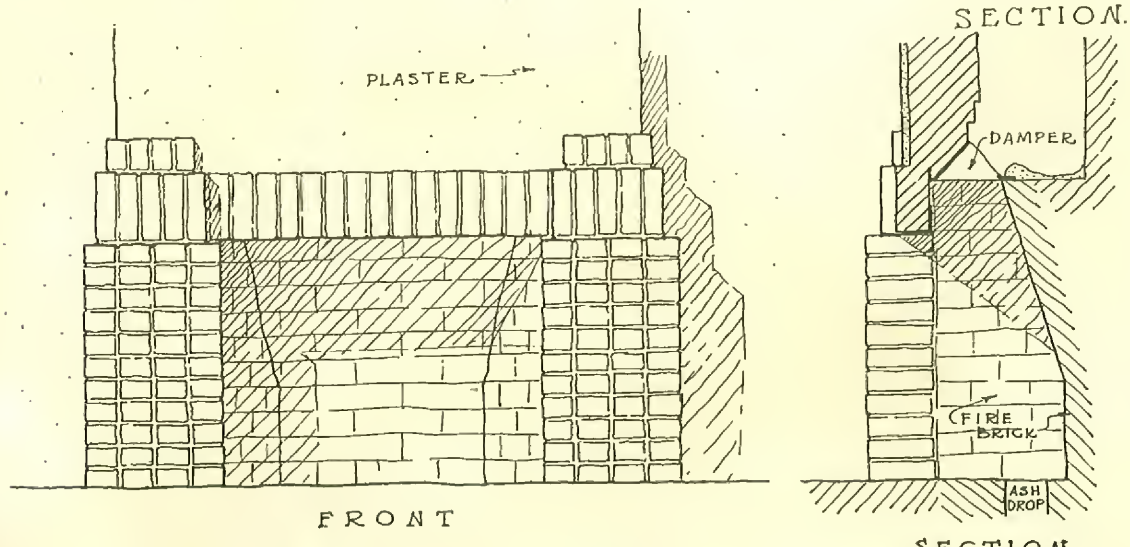




SIDE



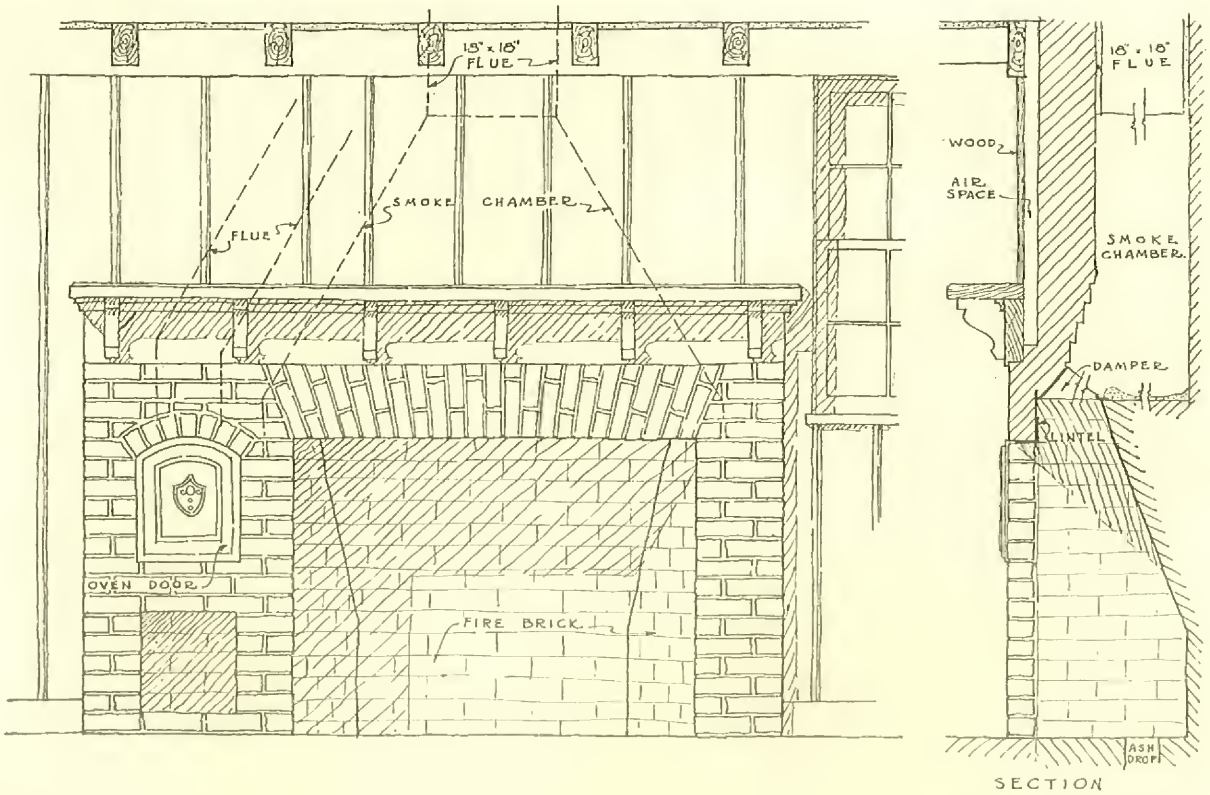
SECTION.



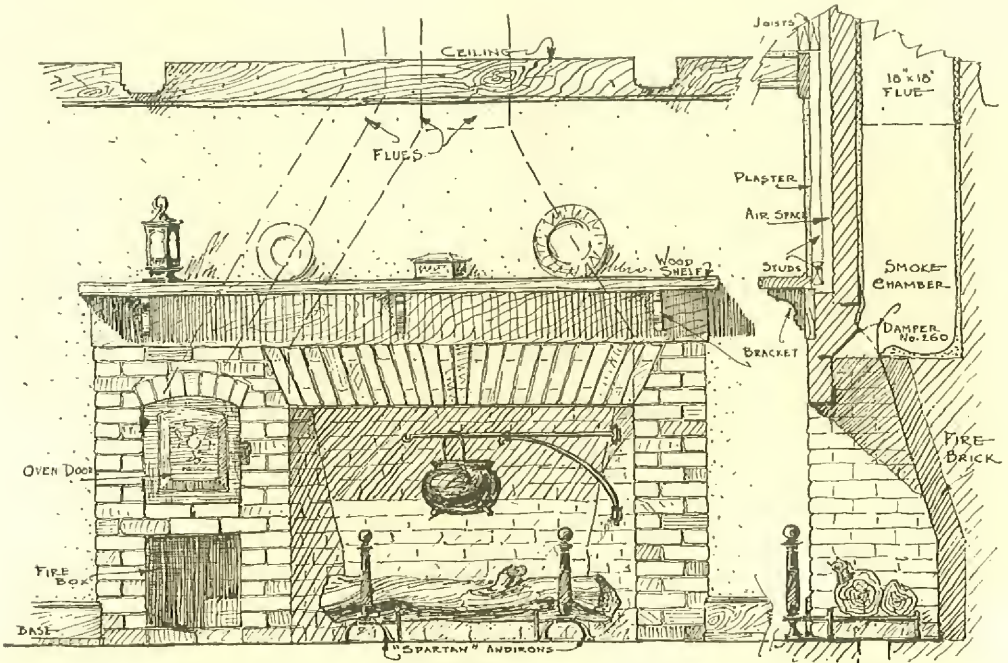
FRONT

SECTION

Dutch Oven Fireplaces

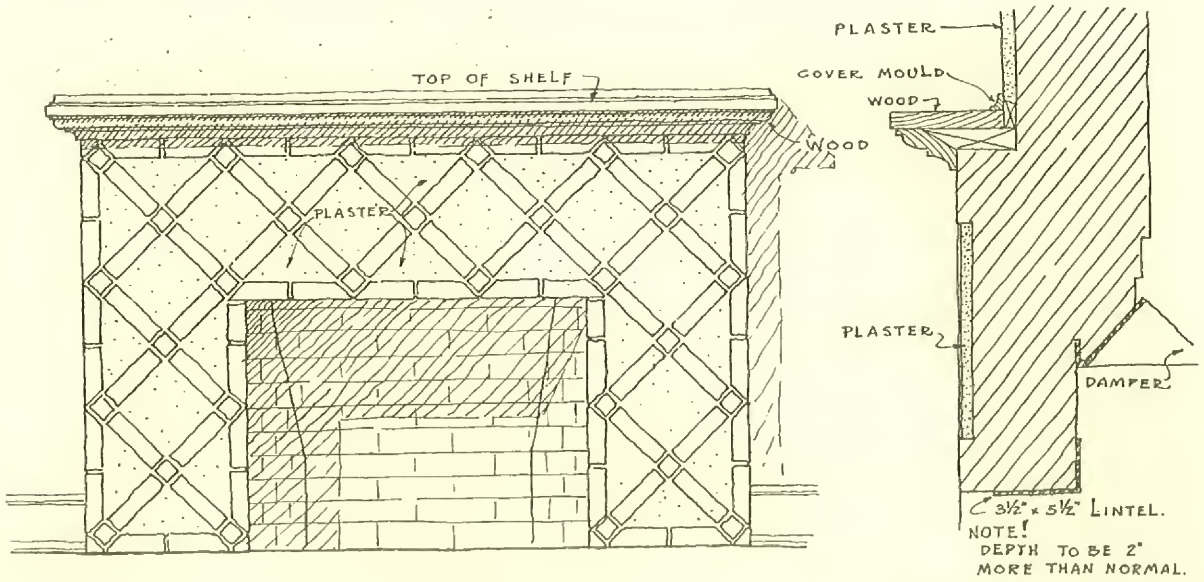


SECTION

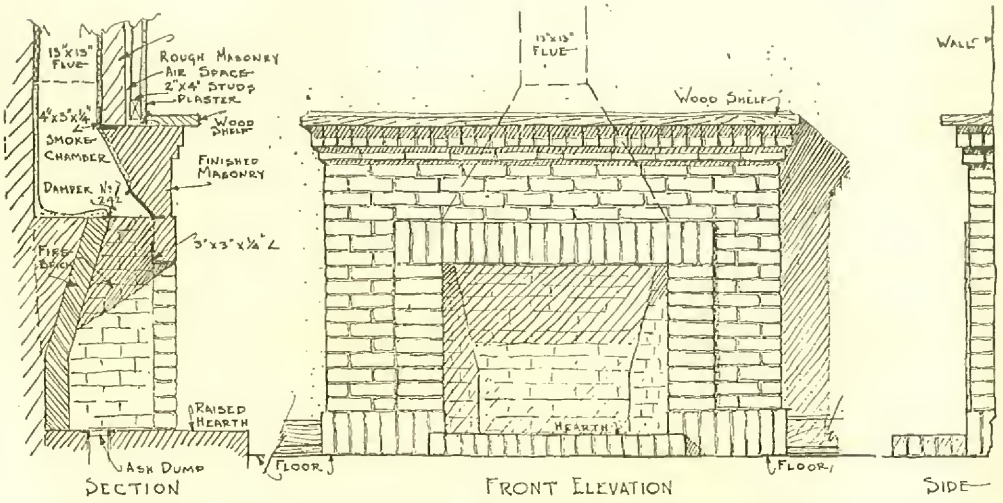


ELEVATION SECTION

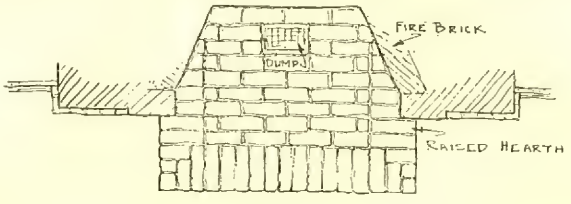
MODERN CONSTRUCTION APPLIED TO EARLY AMERICAN MANTEL - FACE FLUSH



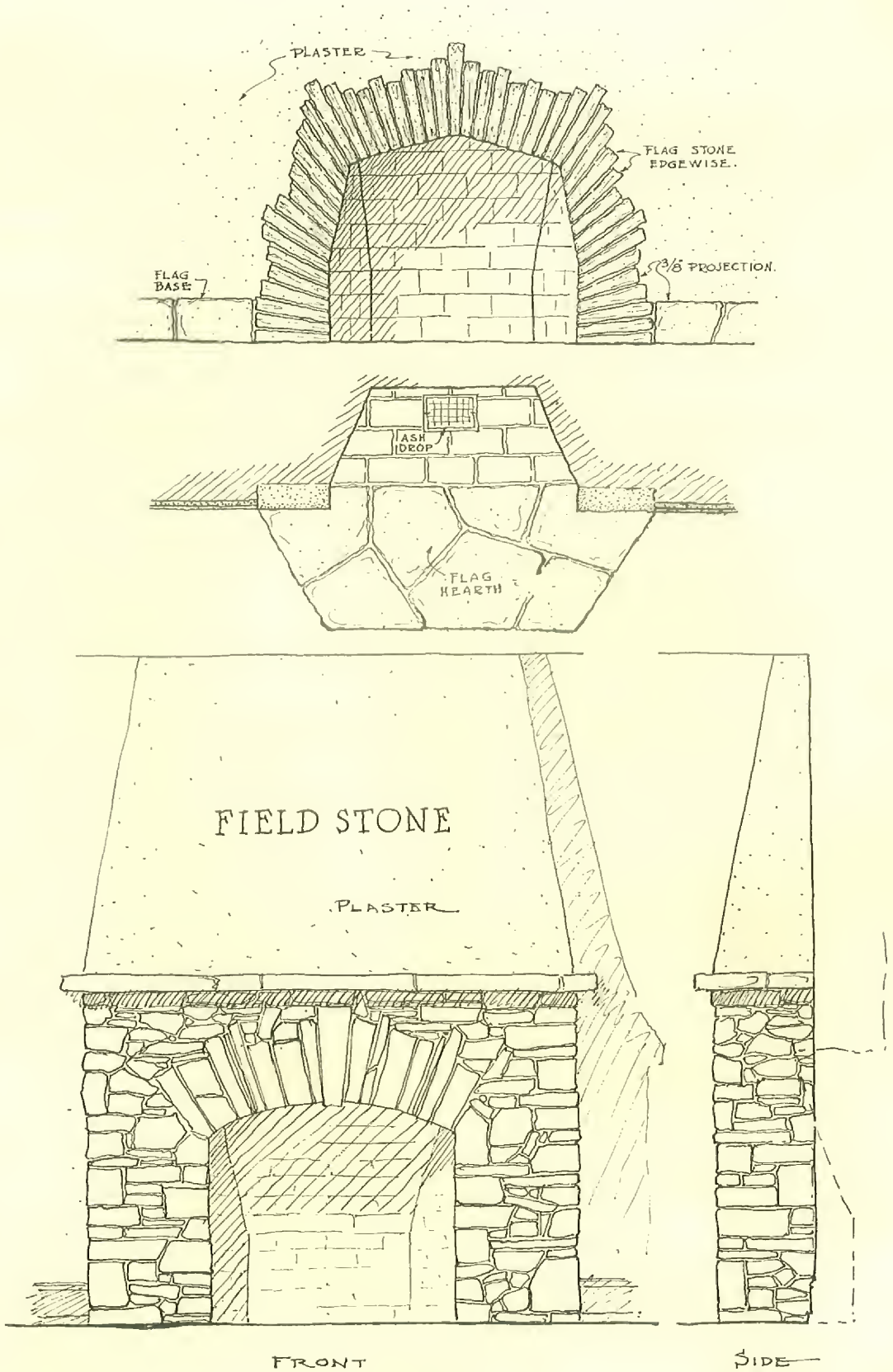
PART SECTION
THRU HEAD.

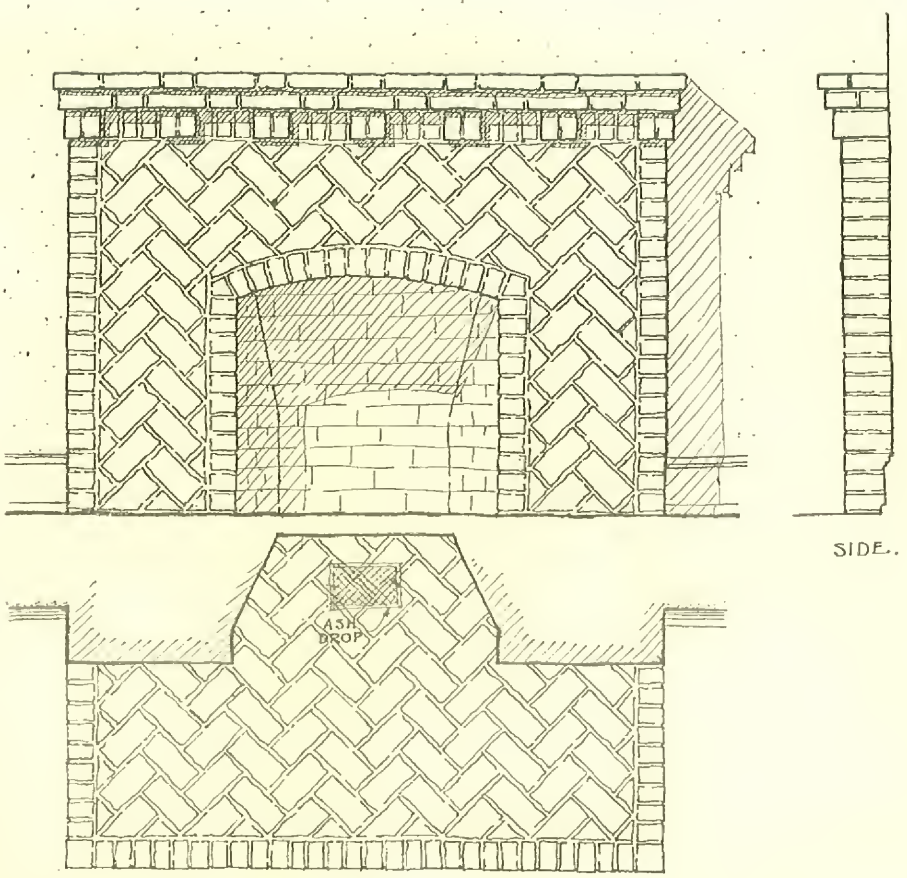


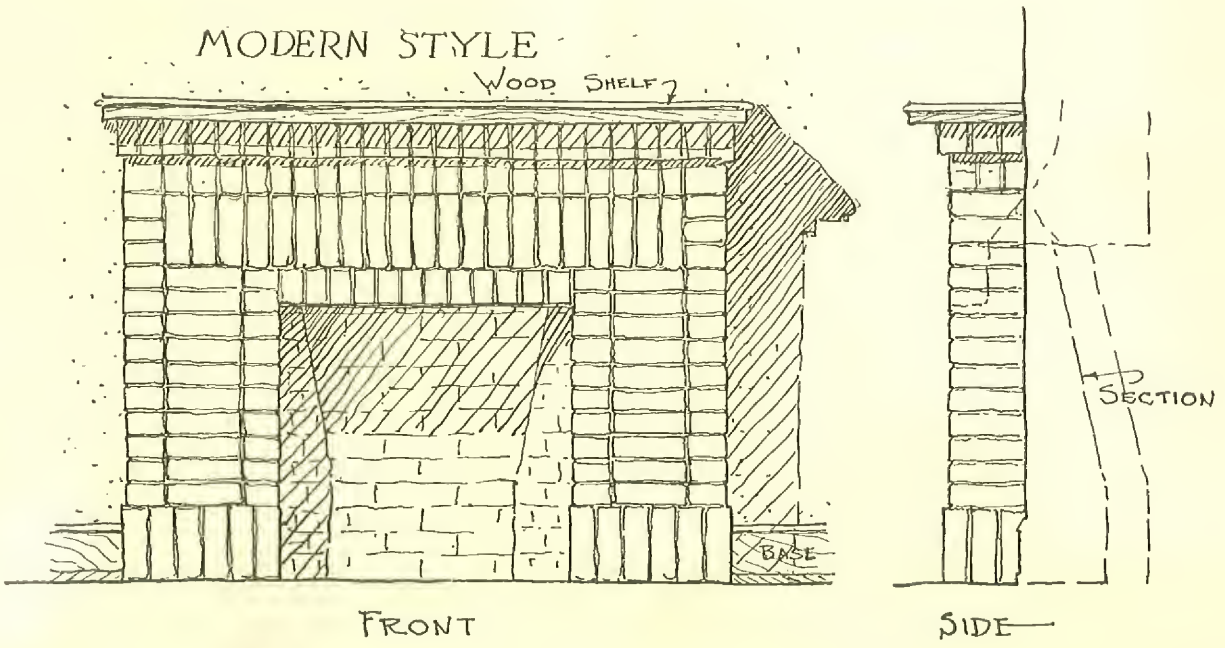
TYPICAL
MODERN
FIREPLACE
CONSTRUCTION

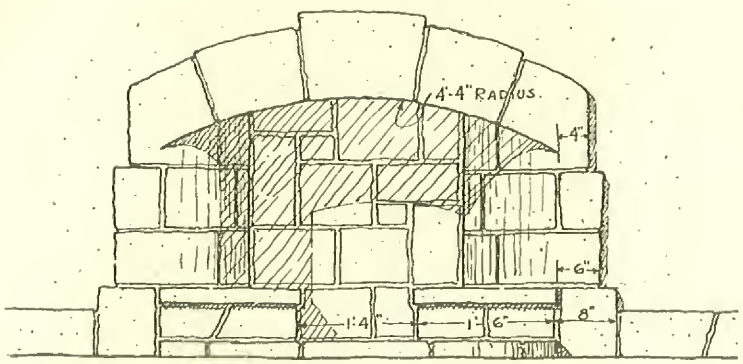


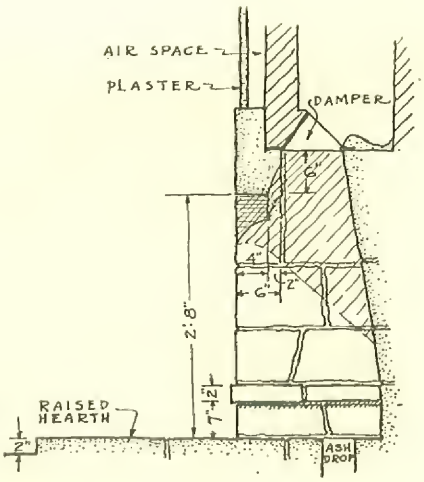
PLAN

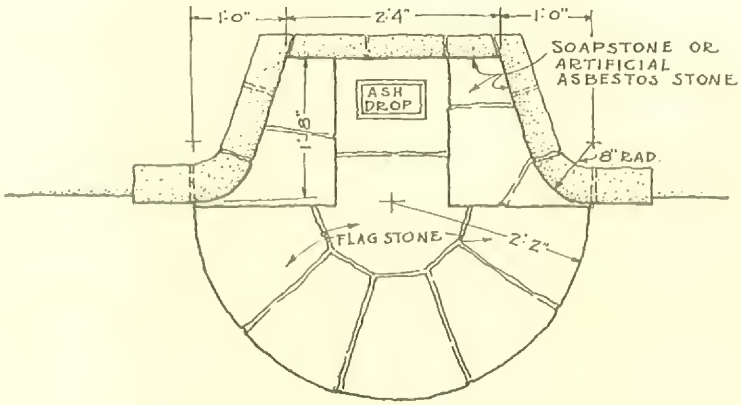

PLASTER
FLAG STONE EDGEWISE.
3/8 PROJECTION.
FLAG BASE
ASH DROP
FLAG HEARTH
FIELD STONE
PLASTER
FRONT
SIDE

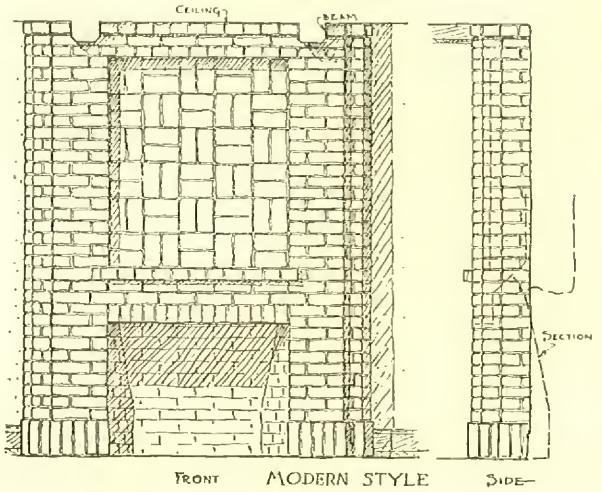

ASH DROP
SIDE.
PLAN

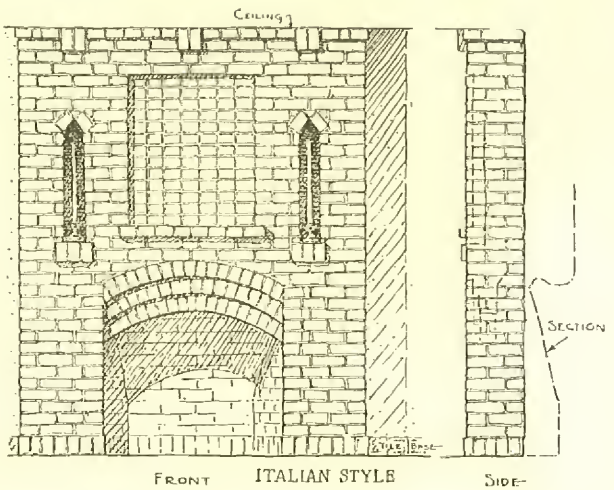

MODERN STYLE
Wood Shelf
Base
Section
Front
Side

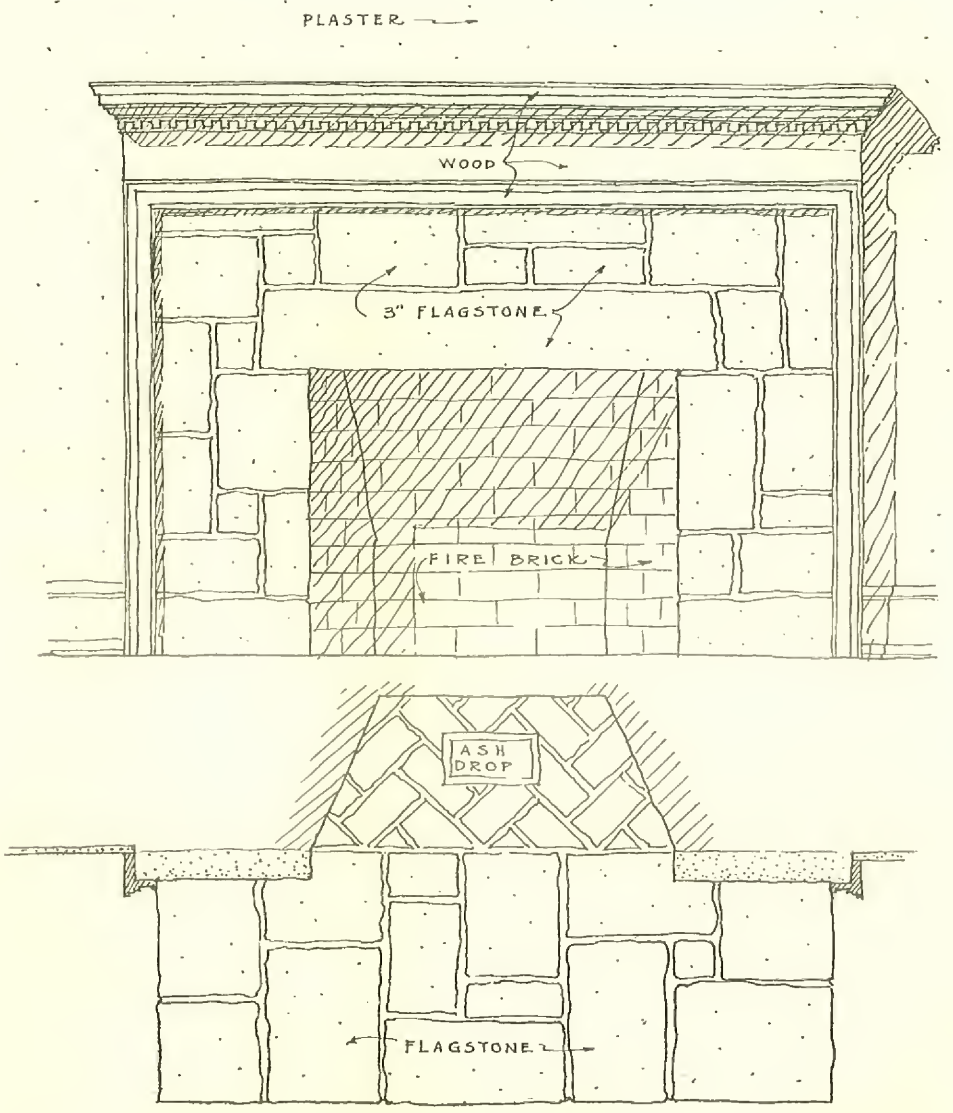

4'-4" RADIUS.
4"
6"
1'-4"
1'-6"
8"


AIR SPACE
PLASTER
DAMPER
6"
4"
6"
2"
2'-8"
1'-4½"
RAISED HEARTH
2"
ASH DROP

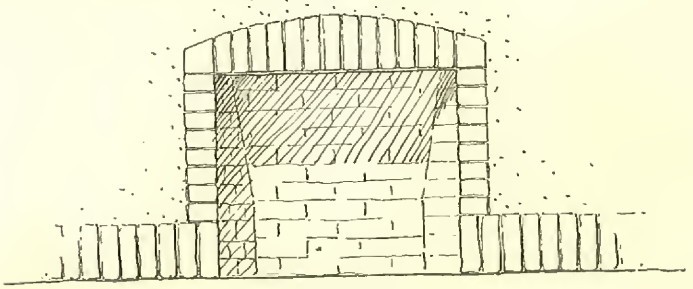

1'-0"
2'-4"
1'-0"
SOAPSTONE OR ARTIFICIAL ASBESTOS STONE.
ASH DROP
8"
8" RAD.
FLAG STONE
2'-2"


CEILING
BEAM
SECTION
FRONT
MODERN STYLE
SIDE

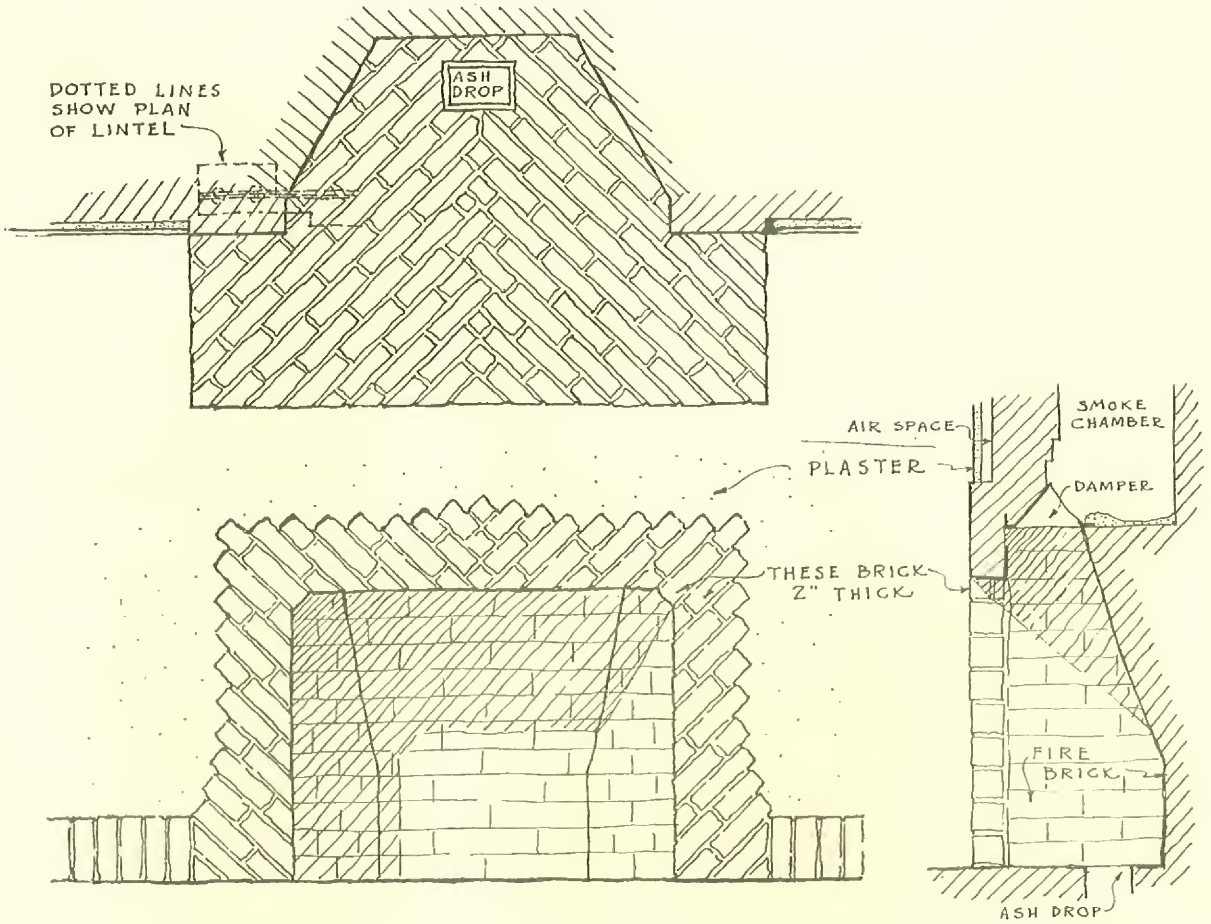

CEILING
SECTION
FRONT
ITALIAN STYLE
SIDE

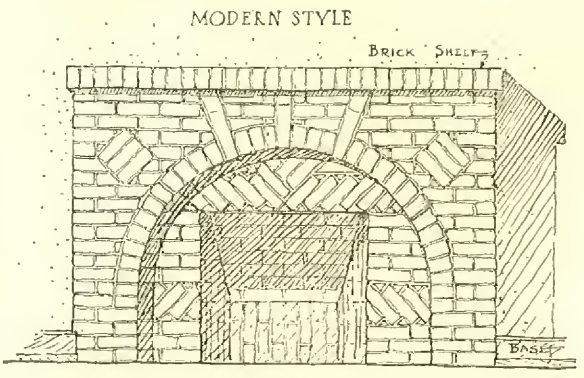


SIMPLE SPANISH ~ FOR RECREATION ROOMS

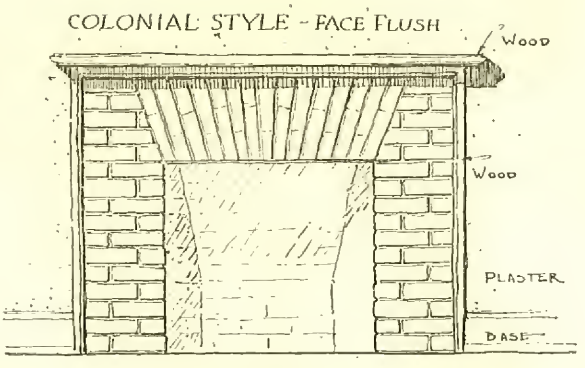


ELEVATION

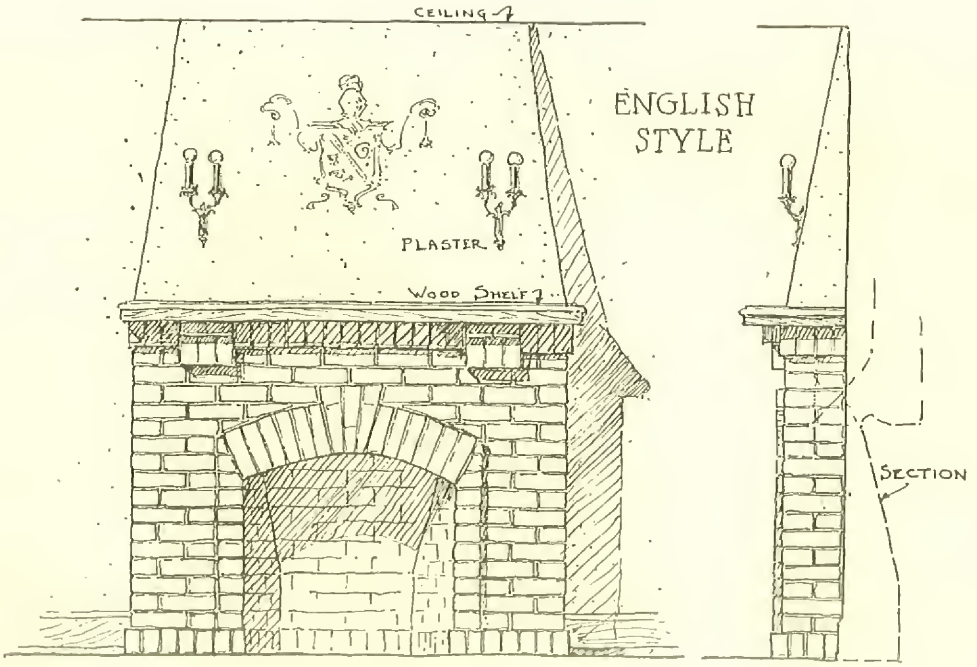

DOTTED LINES
SHOW PLAN
OF LINTEL
ASH
DROP
AIR SPACE
SMOKE
CHAMBER
PLASTER
DAMPER
THESE BRICK
2" THICK
FIRE
BRICK
ASH DROP

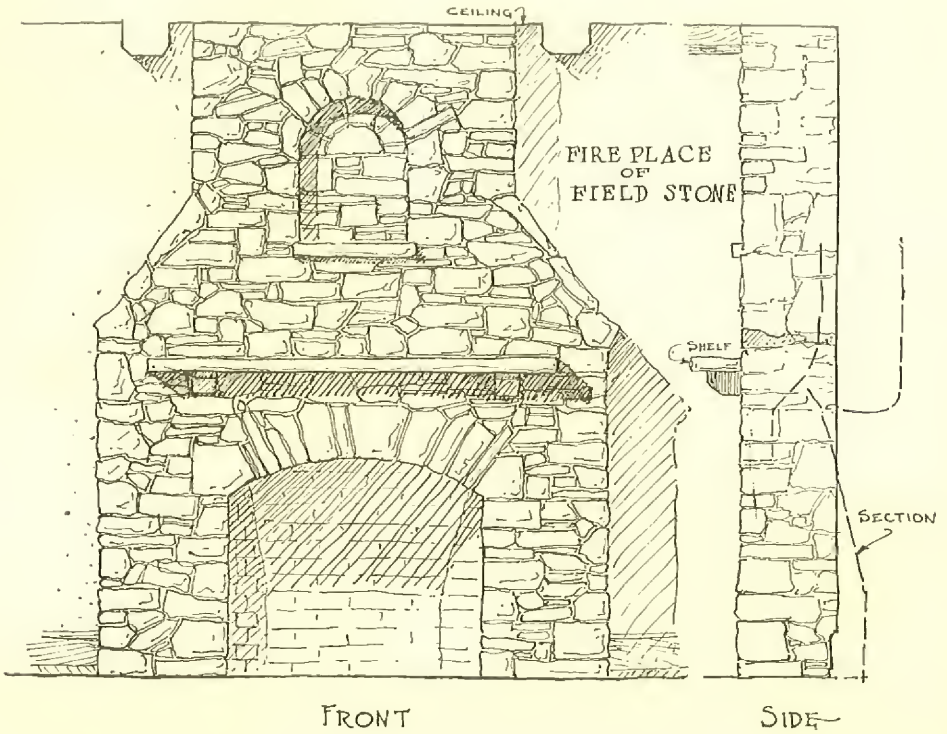

MODERN STYLE
BRICK SHELF
BASE

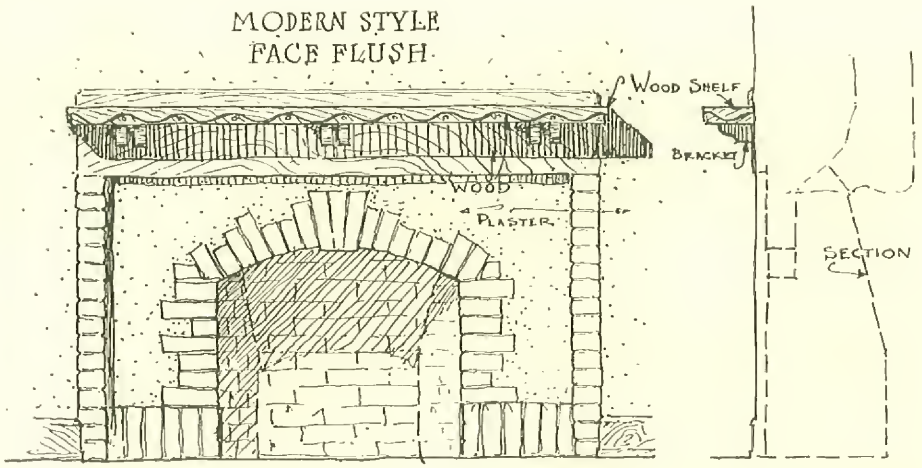
FRONT

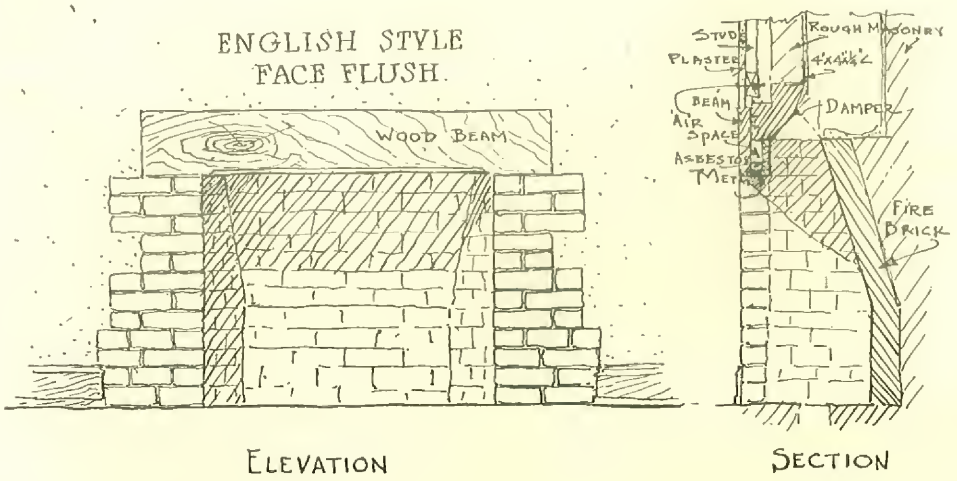

COLONIAL STYLE - FACE FLUSH
WOOD
WOOD
PLASTER
BASE

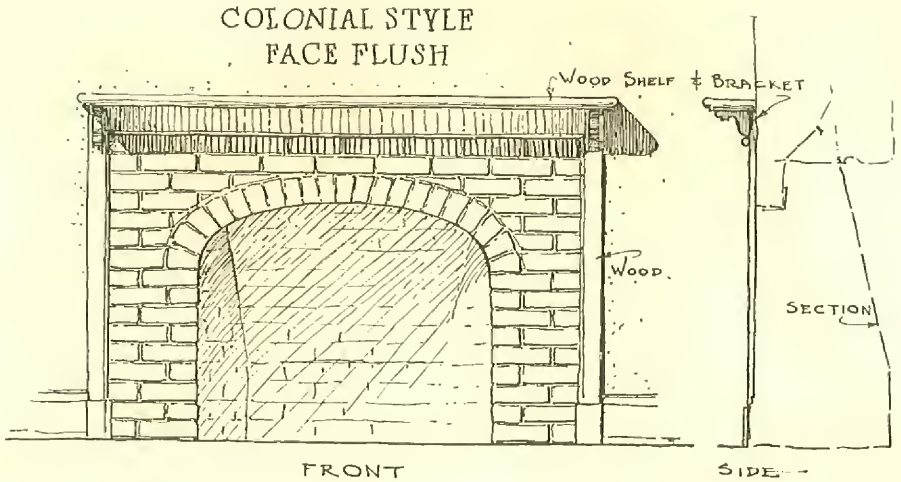
FRONT


CEILING
ENGLISH
STYLE
PLASTER
WOOD SHELF
SECTION
FRONT
SIDE

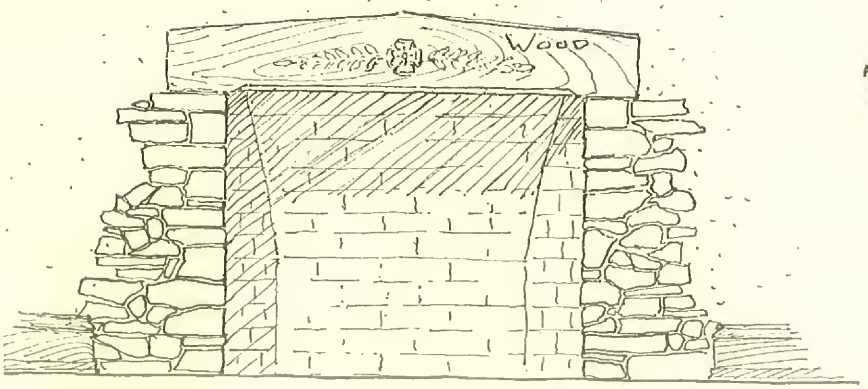

CEILING
FIRE PLACE
OF
FIELD STONE
SHELF
SECTION
FRONT
SIDE


MODERN STYLE
FACE FLUSH
WOOD SHELF
BRACKET
WOOD
PLASTER
SECTION
FRONT
SIDE

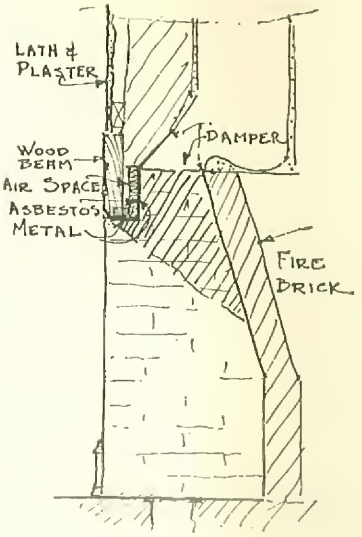

ENGLISH STYLE
FACE FLUSH
WOOD BEAM
STUDS
PLASTER
ROUGH MASONRY
BEAM
AIR SPACE
DAMPER
ASBESTOS
METAL
FIRE BRICK
ELEVATION
SECTION


COLONIAL STYLE
FACE FLUSH
WOOD SHELF & BRACKET
WOOD
SECTION
FRONT
SIDE

FIELD STONE
FACE FLUSH

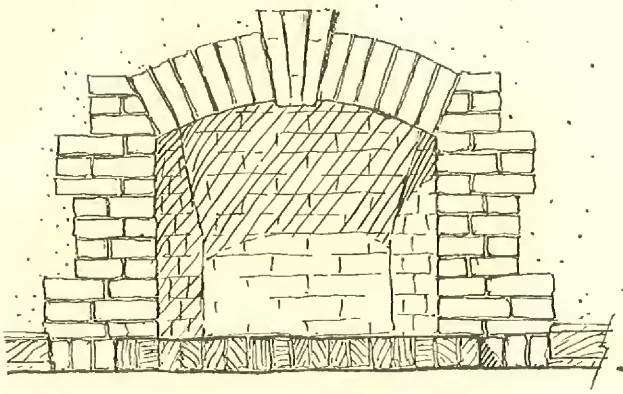


ELEVATION

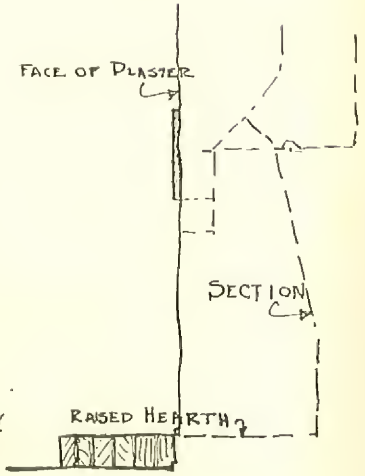


SECTION

ENGLISH STYLE
FACE FLUSH

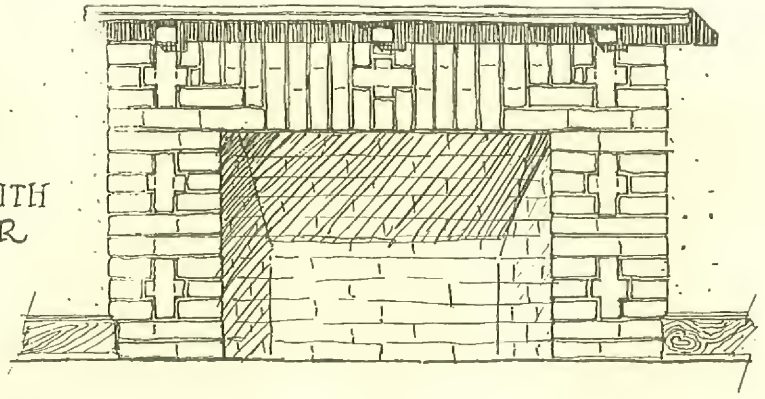


FRONT

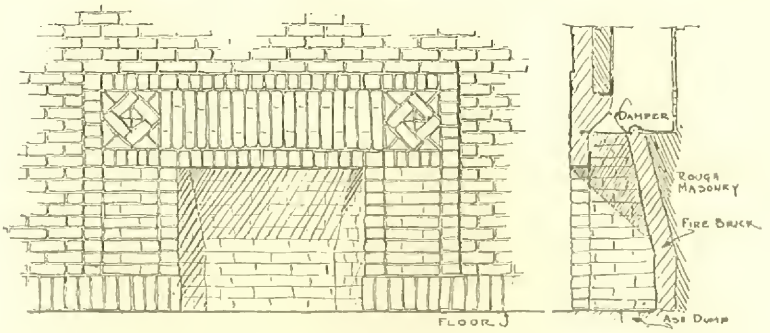


SIDE

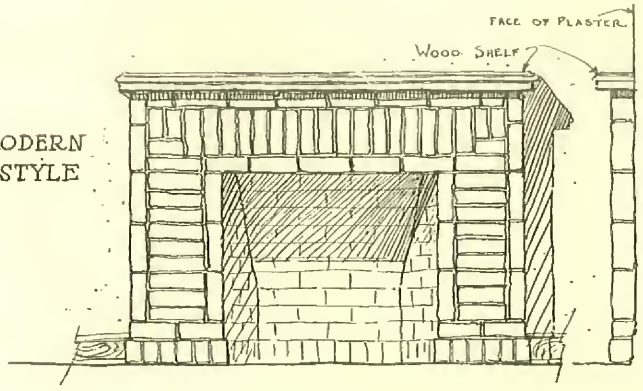
MODERN
STYLE
FLUSH WITH
PLASTER



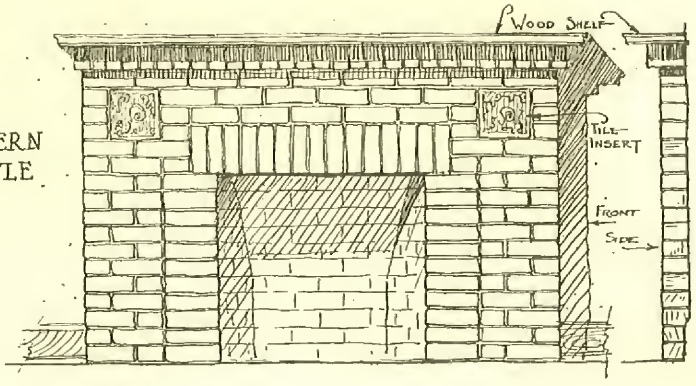
FLUSH FIREPLACE IN A BRICK WALL

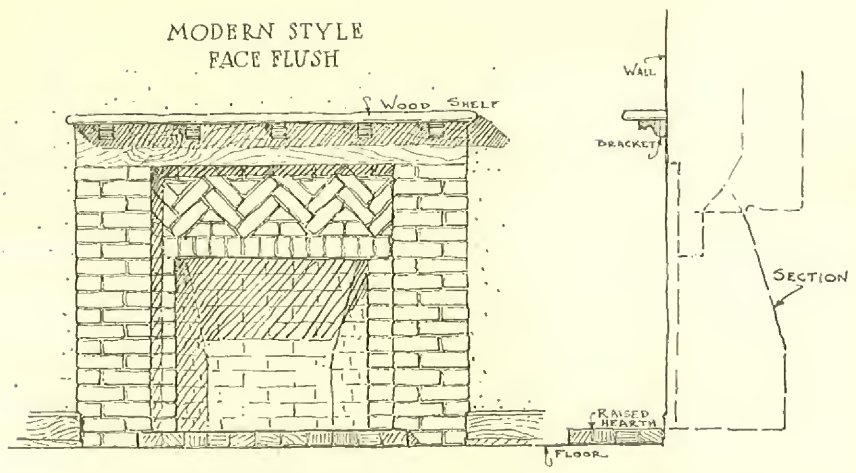


MODERN
STYLE

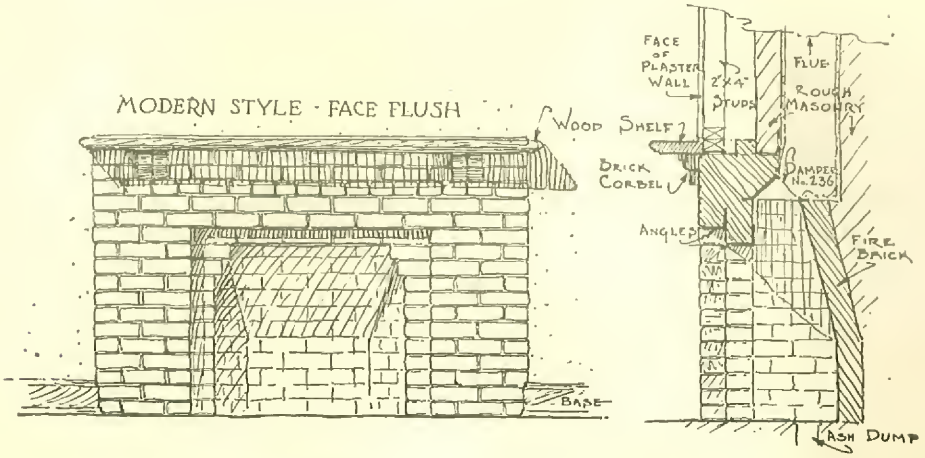


MODERN
STYLE

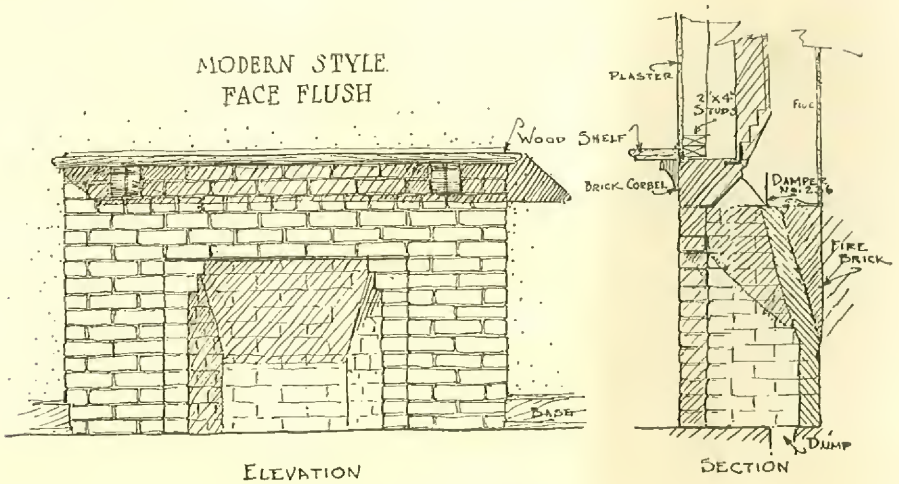




FRONT SIDE



ELEVATION SECTION



ELEVATION SECTION

Fireplace Building for the Amateur

Frequently people owning a cottage or a cabin without a fireplace or those who are going to build a cottage or cabin of their own want to install a fireplace. Sometimes these structures are too far distant from a regular builder or an owner may want the fun of building his own cabin.

To put a successful fireplace in a cabin is not so difficult a task as one might imagine. On these pages are shown progressive pictures on how to build a fireplace into a summer cottage. The directions given here and the illustrations are sufficient to enable a handy man to construct his own fireplace either in a cottage or cabin already built, or in a new structure.

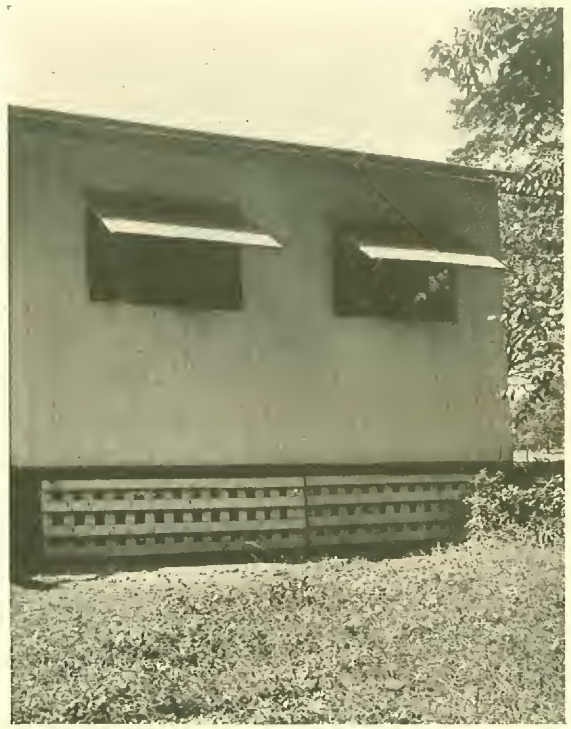


Figure No. 1

Illustration No. 1 shows how the sides of the cottage where the fireplace is to be located looked before the operations were begun. In this particular instance the owner widened the space between the windows at the same time converting them into regular, double-hung windows.

Figure No. 2

The siding was then sawed away to a height of 55 inches and a width of 78 inches in the shape indicated in illustration No. 2. The sill was cut out and the floor removed to a depth of 24 inches from the outside, and the sill at all sides shored or temporarily braced until given support in the masonry of the fireplace foundation.

The foundation was made to go down into the ground below the frost line. Notice that the ash pit door is placed on the outside at the bottom of the ash pit as there was no cellar in the cottage. (Illustration No. 6.)

The brick work was then carried up straight on the outside as shown in No. 6, and the side walls were brought in to correspond to the size of the smoke chamber. Three-quarter-inch ribbed lath and three ½-inch

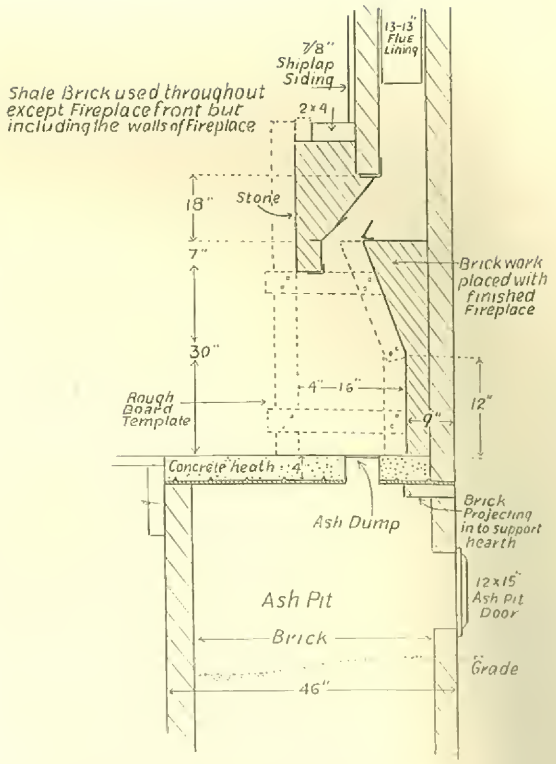
Figure No. 3

bars were placed in the brick at the floor line, forming a support reinforcement for the concrete hearth.

Illustration No. 3 clearly shows the concrete hearth completed and the shape of the rough brick work, including the shape of the smoke chamber. Notice the steel angle at the top resting on the side walls that supports the inside wall of the chimney from the fireplace opening up. Also notice the ash dump in the hearth and the wall ties inserted in the brick for bonding the stone fireplace front.

In No. 4 we have the fireplace ready for the damper. The stone work is in place and the finished fireplace walls have been laid. Notice that the side walls slant inward to the rear (at the rate of 5 inches to the foot) and that the back wall rises vertically for five courses of brick and then slants forward to

Figure No. 4



support the rear flange of the damper. The stone across the breast line of the fireplace is supported by a steel angle. The opening in this illustration is 42" wide, 30" high, and 20" deep. The width of the back wall is 28¾".

Figure No. 5

Notice that the damper will be set about 6 inches above the top of the fireplace opening and the damper itself, as shown in No. 5, rests at the front of the fireplace.

Figure 6

Figure 7

The fireplace is now ready to close in the smoke chamber with stone used for the fireplace front. No. 8 shows the finished fireplace with an inexpensive wood mantel on top.

No. 7 shows how the chimney rises to sufficient height to give proper draft and is capped by a stone to prevent water from coming down in the wintertime when the cabin is not used and collecting on the smoke shelf, which might, upon freezing, cause difficulties.

In the diagram on Page 67 the crude assembling of boards is a rough guide to assure the workman that his slopes, heights, etc., on the internal construction will be correct. For your information the following amount of material was used in this particular fireplace of the dimensions given above.

The stone was quarried on the owner's land and took the number of pieces as shown in the photograph. The job took 1500 shale brick, 3 tons of sand, 9 bags of cement, 4 two-foot pieces of 13x13 terra cotta flue lining, 2 yards of metal ribbed lath, three ½-inch rods to support the lath, 15 wall ties, a 12x15 ash pit door, a No. 242 damper, an ash dump, a clean-out door and a 34-inch fire basket.

Figure 8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